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Manufacturers RECORD

An Exponent of Americanism

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This Nation's Business Is to Lick the Kaiser

By George Wharton Pepper, Philadelphia.

Suppose you were at the head of the German bureau which has the job of doing everything possible to prevent Americans from taking the war seriously. Suppose you had plenty of money to spend and multitudes of agents all through the country to help you, what plan would you adopt to take the heart out of our war preparations and to cause us to discount the appeals for popular support that came from our Government? The answer is simple: *You would do everything in your power to make the American public think and talk about an early peace.* Everybody you could buy and everybody you could deceive you would bribe and fool, and in so doing you would be doing more effective work for the Kaiser than if you were to blow up a dozen of our munition plants and our biggest shipyards.

We Americans can fight if we have to. But we are a peace-loving people and we don't want to fight unless it's absolutely necessary; and nobody can put sand in the gear-box of our war preparations so effectually as the men who hold out to us the hope of an early peace.

This is exactly what the German propagandists are doing, from the highest to the lowest—from the Imperial German Chancellor to the silly little pacifists who are his dupes. And I want to do my best to counteract their insidious influence. I want to warn you to close your ears against the seductive and destructive talk of the deceivers and the deceived who are even now prattling about the terms of a satisfactory peace. In the first place, an early peace is a delusion. There is only one chance of an early peace (I speak soberly and from conviction), and that is the chance of a speedy and decisive German victory.

A German victory, if it comes at all, will be a sweeping victory, and it will be followed by consequences to the United States which only fools can refuse to see. Nobody can give an intelligent reason why the consequences of a German victory should not be as serious for the United States as they have been for Belgium. If you want the kind of early peace that will follow such a victory, it is the easiest thing in the world to get. All you have to do is to do nothing, and you'll get it—on the solar plexus. But a peace which will attain the objects for which our Allies have struck giant blows and made huge sacrifices, a peace that will make the world safe—I do not say for democracy, but for our women—such a peace is far off, and to attain it we must wage war like men. And no man ever yet fought a winning fight if all the while he was thinking how much nicer it would be if he didn't have to fight at all.

Apart from the experience of soldiers, even lawyers know that when the jury is in the box and your adversary begins to suggest settlement, the thing to do, if you have a righteous case, is to smile grimly and answer that a verdict for the full amount of your claim is a good enough settlement for you. We want no peace talk now. The newspapers ought to be patriotic enough to cut such cackle—no matter what source it comes from. At present it is this nation's business to do the greatest piece of licking the world has ever seen.

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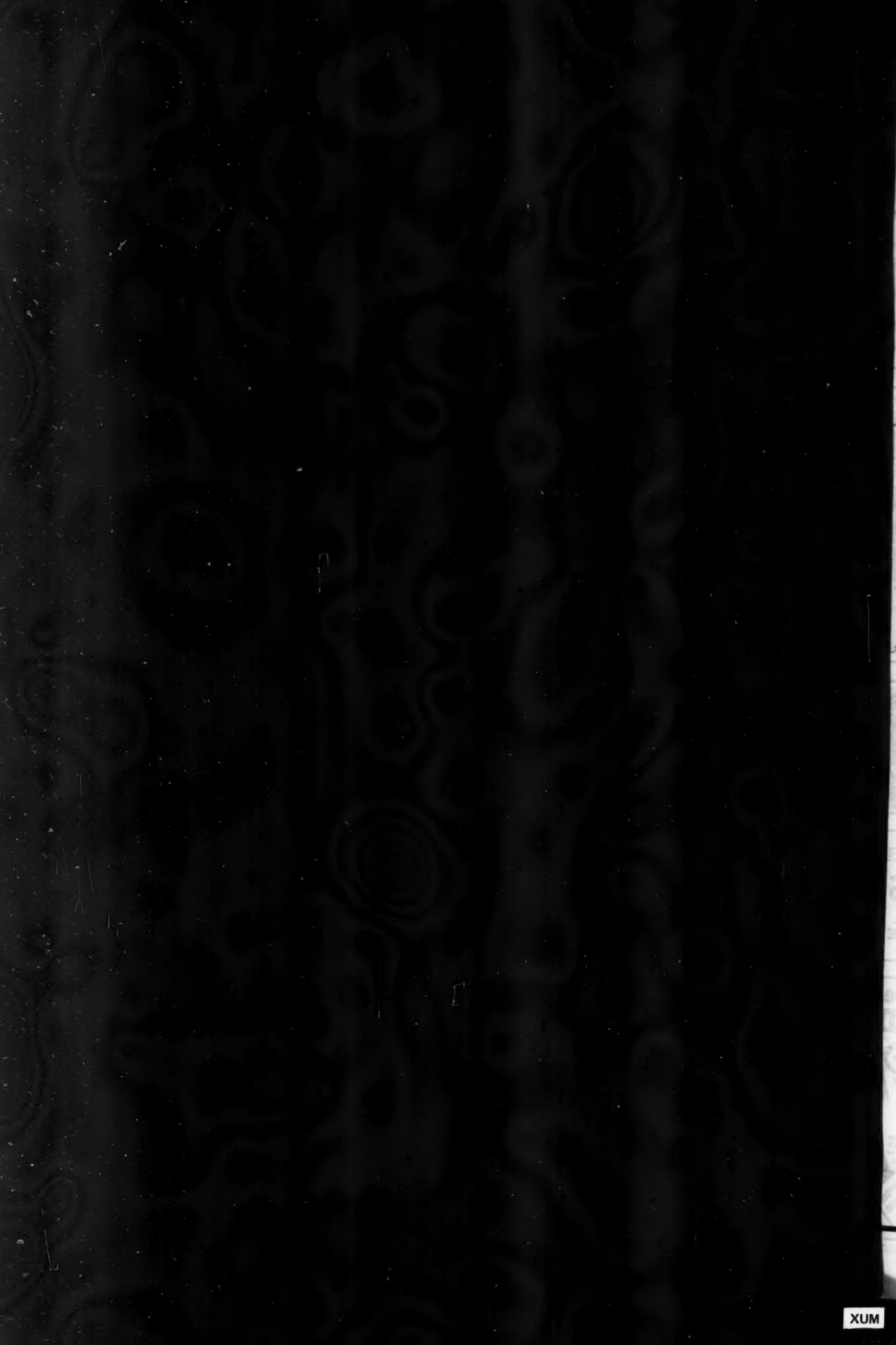
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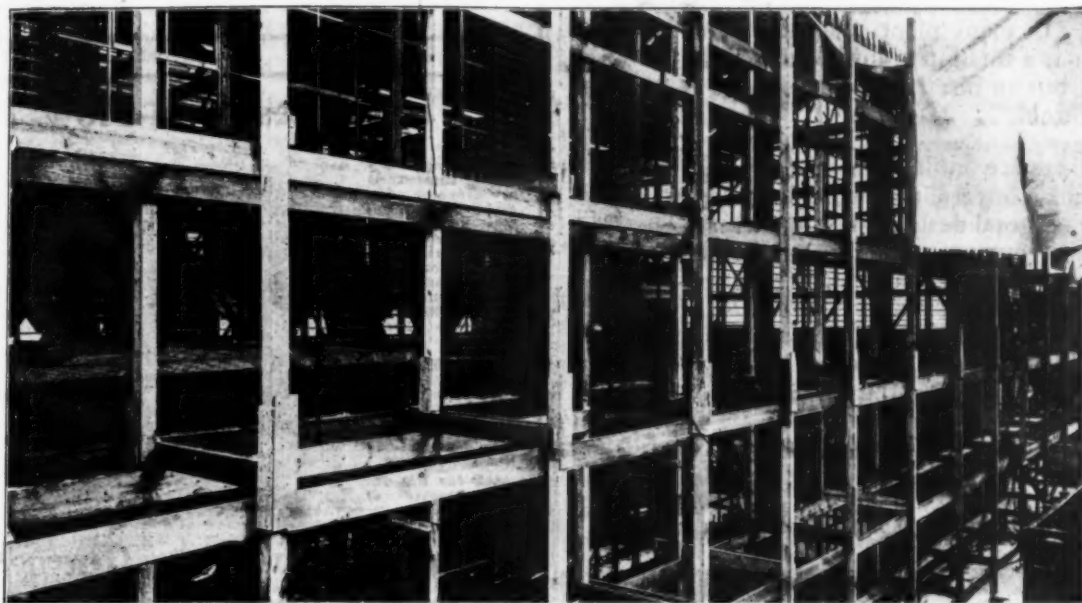
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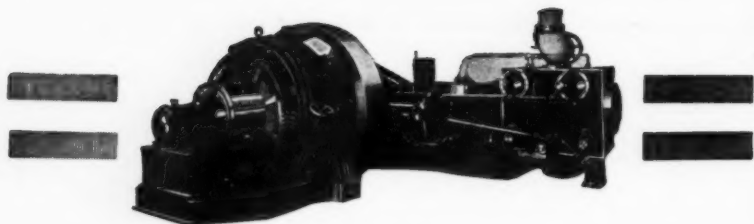
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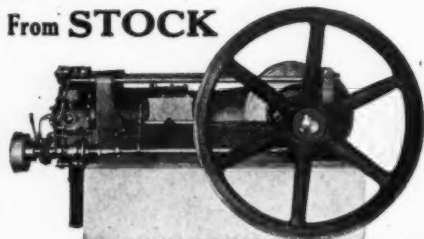
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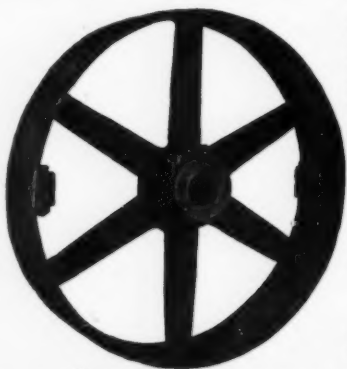
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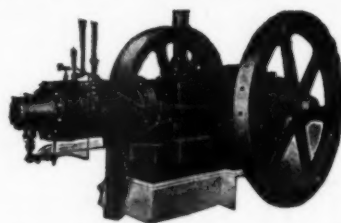
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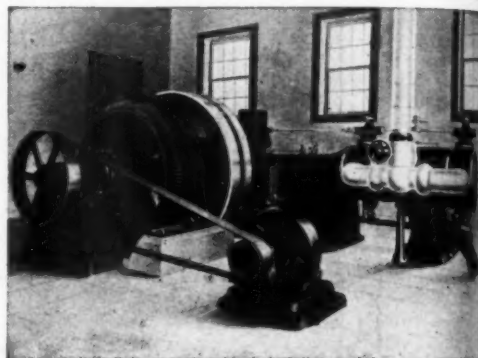
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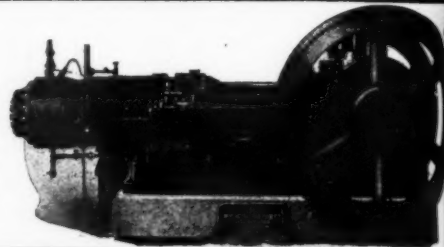
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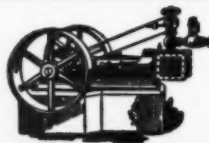
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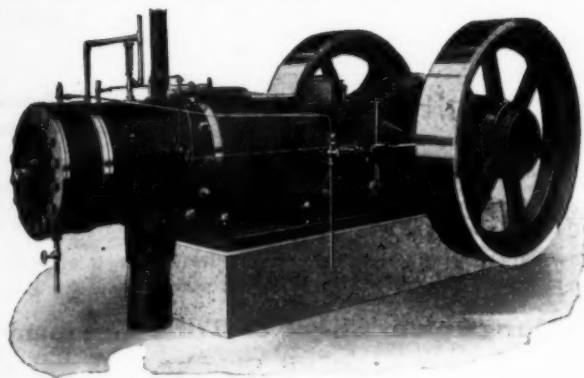
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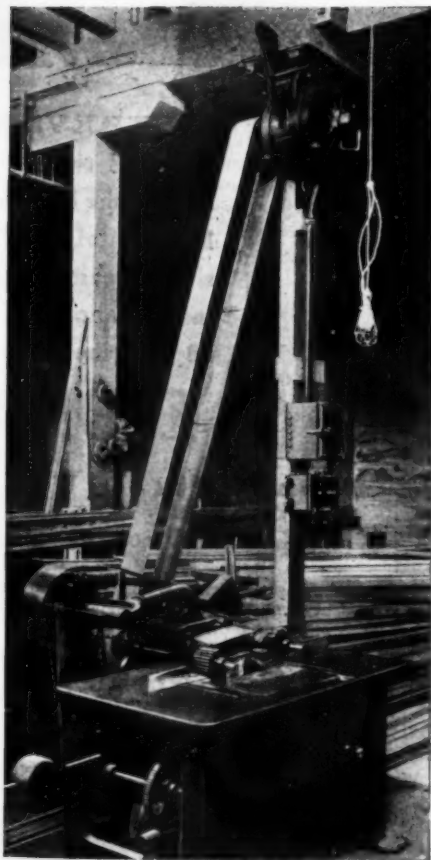
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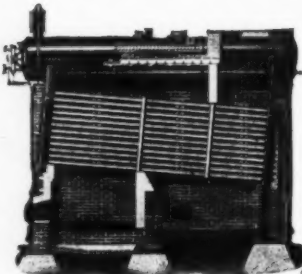
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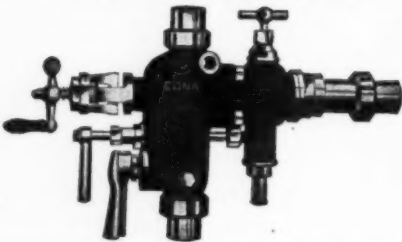
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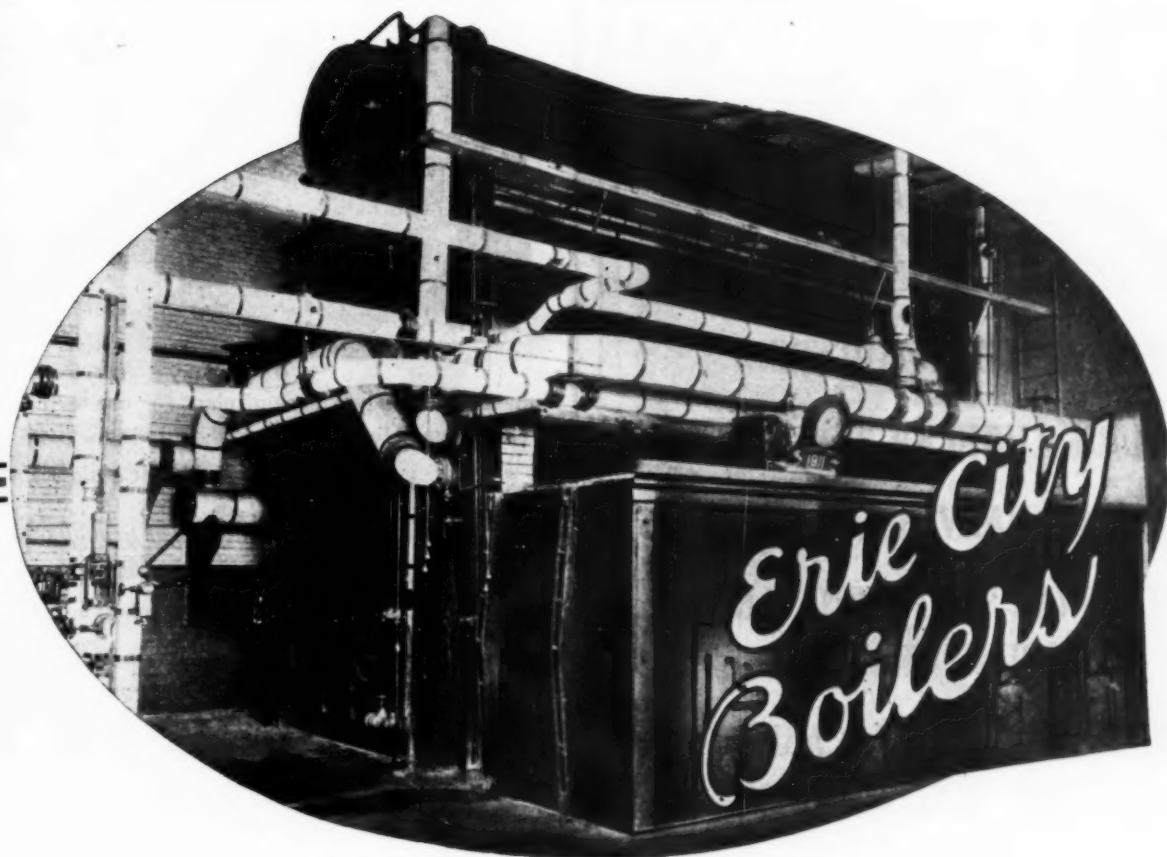
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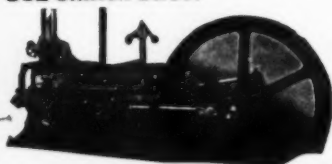
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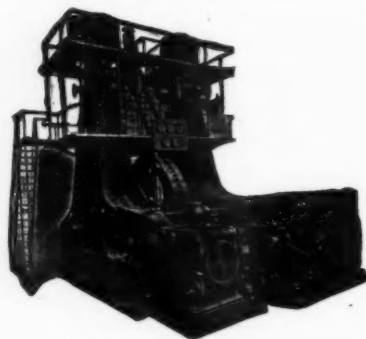
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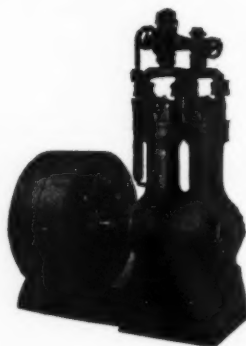
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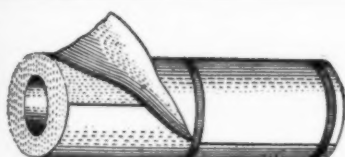
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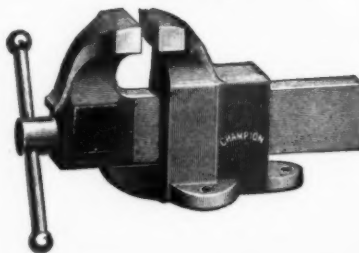
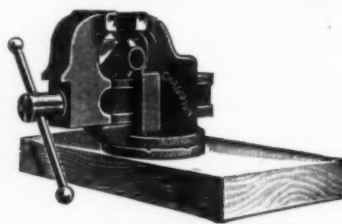
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which tells what saw
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THE WORLD'S GREATEST TOOLMAKERS
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W. S. S. WORTH \$5.00 JANUARY 1, 1923					

W. S. S. WORTH \$5.00 JANUARY 1, 1923

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"Why must my boy's letters be censored? Why can't they let him tell me where he is and what he is doing? Surely a mother has a right to know such things. Besides, he is a loyal American and could be trusted."

It would be most unnatural if American parents did *not* feel that way. But they forget that in the end censorship is for the safety of the men themselves.

An American officer—and this is a true story—indiscreetly mentioned, in a letter home, the name of the French village where his regiment was billeted. This slipped by the censor and the letter was published in his local newspaper. Shortly afterward the Germans launched a particularly destructive raid against that town, which had not hitherto been attacked. The officer was a loyal American, as were the proud and happy home-folks who innocently

gave his letter to the loyal little newspaper. But good American lives were needlessly jeopardized.

Soldiers will die the victims of our carelessness before we fully learn this lesson—but we are learning fast.

There is nothing mysterious about the German spy system. It is simply the quiet, ceaseless collection of fragments of fact—often individually harmless—by German agents everywhere. This material is patiently pieced together to make up that complete story of the number, location and quality of our soldiers without which no attack could hope to succeed.

The German studies the position, customs and even the mental state of our men as a hunter studies his game—and for the same purpose.

His object is to kill. It is not possible to prevent his getting some of this information, but he cannot get it all unless we help. The almost superstitious belief that he knows it all anyhow, is not well founded. Already he has to work hard for what he gets, and his task is daily becoming more difficult as Americans begin to open their eyes and shut their mouths. We must not *help* him to kill. Indiscreet statements are too easily translated into terms of death for American soldiers—perhaps your boy.

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WASHINGTON, D. C.

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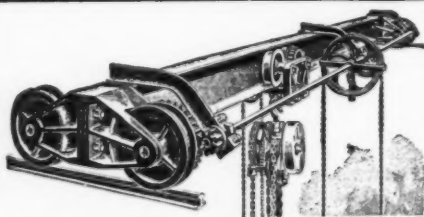
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The belt
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Special Attention Given to Repairs

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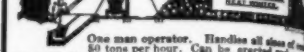
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Single rope installation.

Storage 1000 tons

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One man operator. Handles all sizes of material. Can be erected and dismantled in any angle from railroad switch.

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Unclimbable, rustless and fireproof chain link woven steel fences. Equalled for durability and protection. See our display advertisements in the first and third issues each month.

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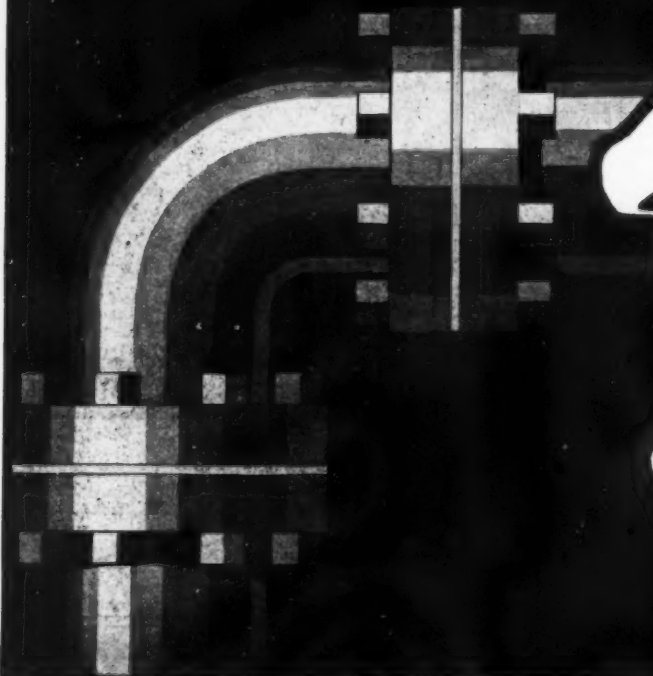
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Packing is the only
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—said the engineer**



**"Experience has
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"It won't leak or blow out—and it's guaranteed not to harden. It's the real, sure enough cure for all kinds of flange packing troubles.

"I use it all around the plant for I know that Steam, Oil, Air, Acid and Ammonia all look alike to Norka Red Sheet.

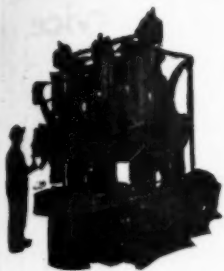
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Belting—Packing—Hose—Molded Specialties

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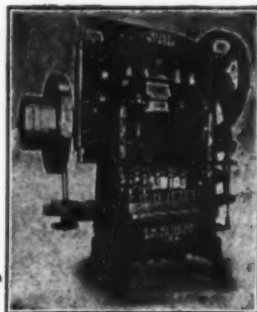
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Bliss Double Crank Toggle Drawing Press arranged with friction dial and lateral feeds. Adapted for the economical manufacture of such articles as lamp and lantern bodies, lamp founts, drinking cups, oil can bodies or similar work requiring a series of operations. Five operations are performed simultaneously at each stroke. Intermediate handling and danger to operator is eliminated.

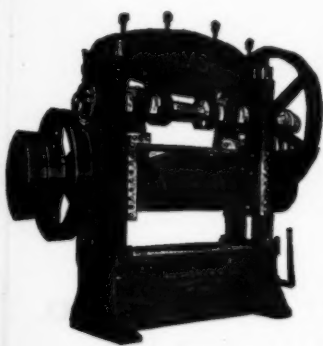
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ATKINS SAWS are made from "Silver Steel"—our exclusive formula—"The Finest on Earth."

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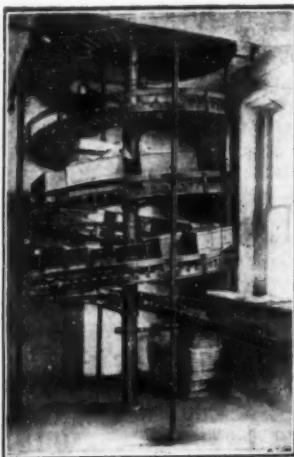
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To lower boxes, barrels and miscellaneous packages thru all the floors of your plant without a single man or platform elevator being required would increase your capacity four-fold and save you dollars, besides. Speed up the work, and save every last penny you can by using

CONVEYERS

to do work ordinarily performed by men and women. The saving in man-power alone is doing "Your Bit" in the National emergency. Incidentally you'll save the cost in a few months and then Conveyers will go on adding money to your bank account long after the purchase price is forgotten.

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Appliances for every purpose—units which make up transmission equipments of the highest efficiency and ultimate economy.

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Long Life
Bushings
In Spite of Neglect

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"NIGRUM"
(Impregnated Wood)

"BOUND BROOK"
(Graphite-and-Bronze)

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Trade Mark Reg. U. S. Pat. Off.

All genuine Graphited Oil-less Bushings have always been made at Bound Brook, U. S. A.

BOUND BROOK OIL-LESS BEARING CO.

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Specialists in the manufacture of Oil-less Bushings for more than a third of a Century

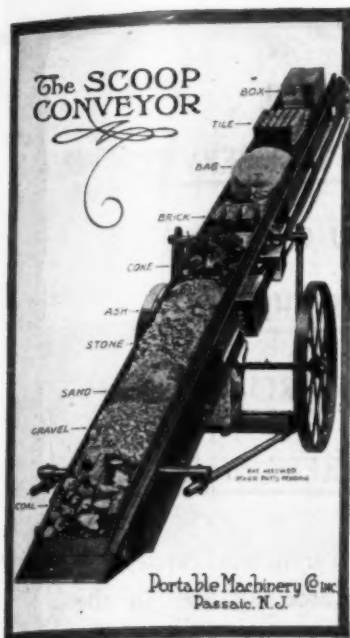
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Passenger and Freight.
All Powers.

TURNER ELEVATORS

K. C. ELEVATOR MFG. CO.

(Established 1881)

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DO
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WORK
OF
FROM
6
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12
MEN**

Hundreds of manufacturers are now using the Scoop Conveyor to load and unload cars, trucks and wagons and to stack into storage piles or bins.

Ask for further information

PORTABLE MACHINERY CO., Inc.
PASSAIC, N. J.

"Come Up Higher!"

Is the Most Glorious Call on Earth (and in Heaven).
BUT IT NEVER COMES BY ACCIDENT.

Here is an example to show that "There's a Reason" as old Postum used to say, and that reason is BRAINS.

Now, you know (or not), that one of the very biggest men in our country is Mr. Edward R. Stettinius.

He is the Purchasing Agent for the United States Government. When you consider the BILLIONS your Uncle Samuel is spending you can guess what that means.

Who is this man Stettinius? Listen.

He started in Chicago as secretary and treasurer of a little company to make a new boiler. That new boiler, thanks to the dynamic of Stettinius, became such a commercial success that the great Babcock & Wilcox concern had to absorb it. That boiler was the well-known Sterling Boiler.

The Sterling Boiler Co., at Barberton, Ohio, was one of the first concerns to "Hook 'er to the Biler."

After the absorption of the Sterling by the Babcock & Wilcox folks Mr. Stettinius was taken by the Diamond Match Co. He became the president of the Diamond Match Co., the greatest match concern in the world.

Then when J. P. Morgan Co. had so much stuff to buy for the Allies that great banking house sent for Stettinius and took him in the firm.

And when Uncle Sam wanted a man to attend to his buying he sent for Stettinius and made him one of the war council.

Brains, brains, brains.

Oh, yes, we have equipped the big plant, the Diamond Match Co., with the Ridgway Elevator.

In short, the "Come-Up-Higher" men everywhere, and those who can tell a good thing when they see it, and you will find almost always these are they who

"Hook 'er to the Biler"

The Ridgway & Son Co.
COATESVILLE, PA.

Elevator Makers to Folks Who Know



Elevator in Large Soap Factory in Jersey City



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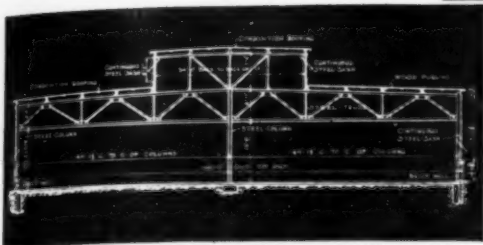
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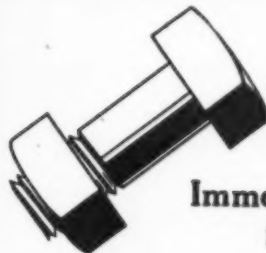
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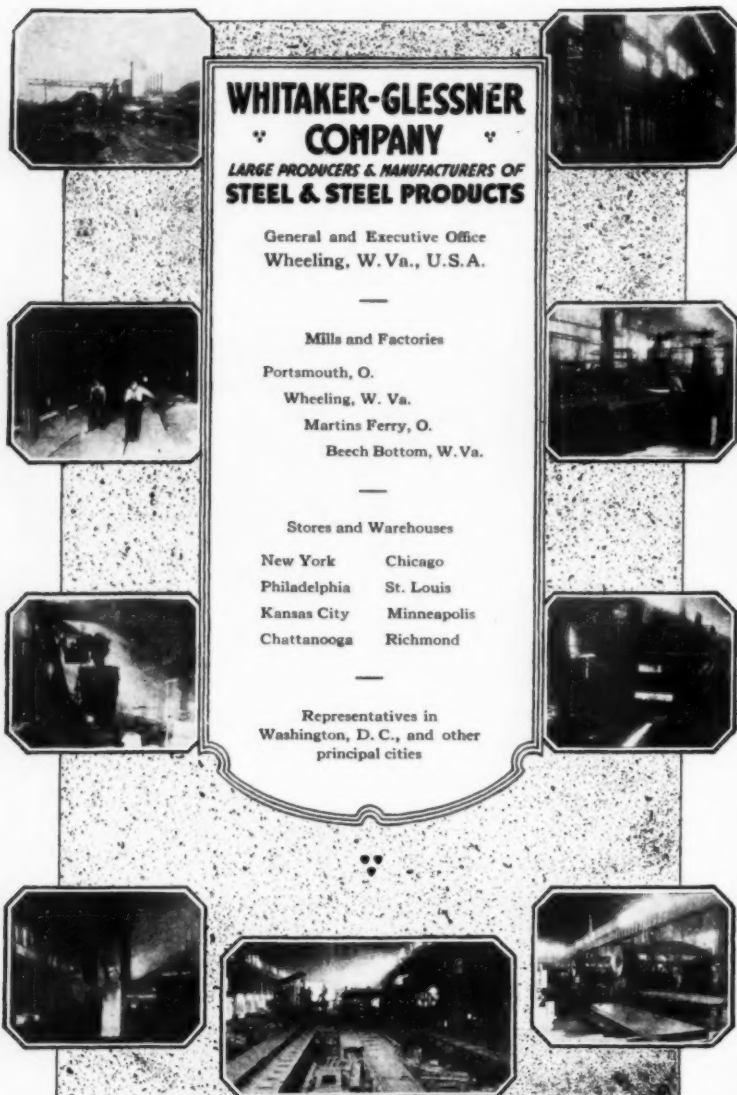
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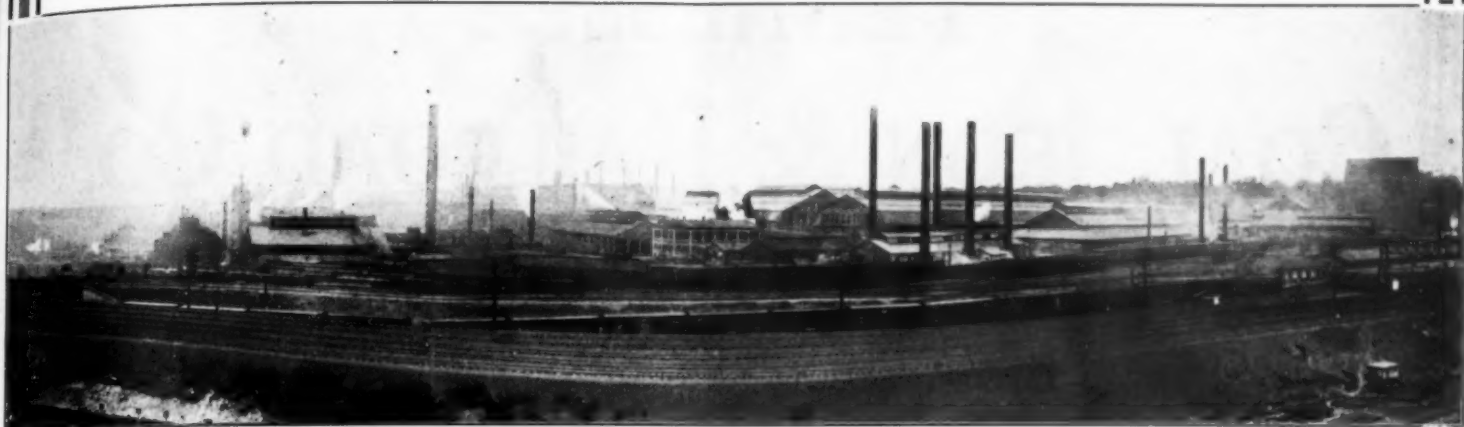
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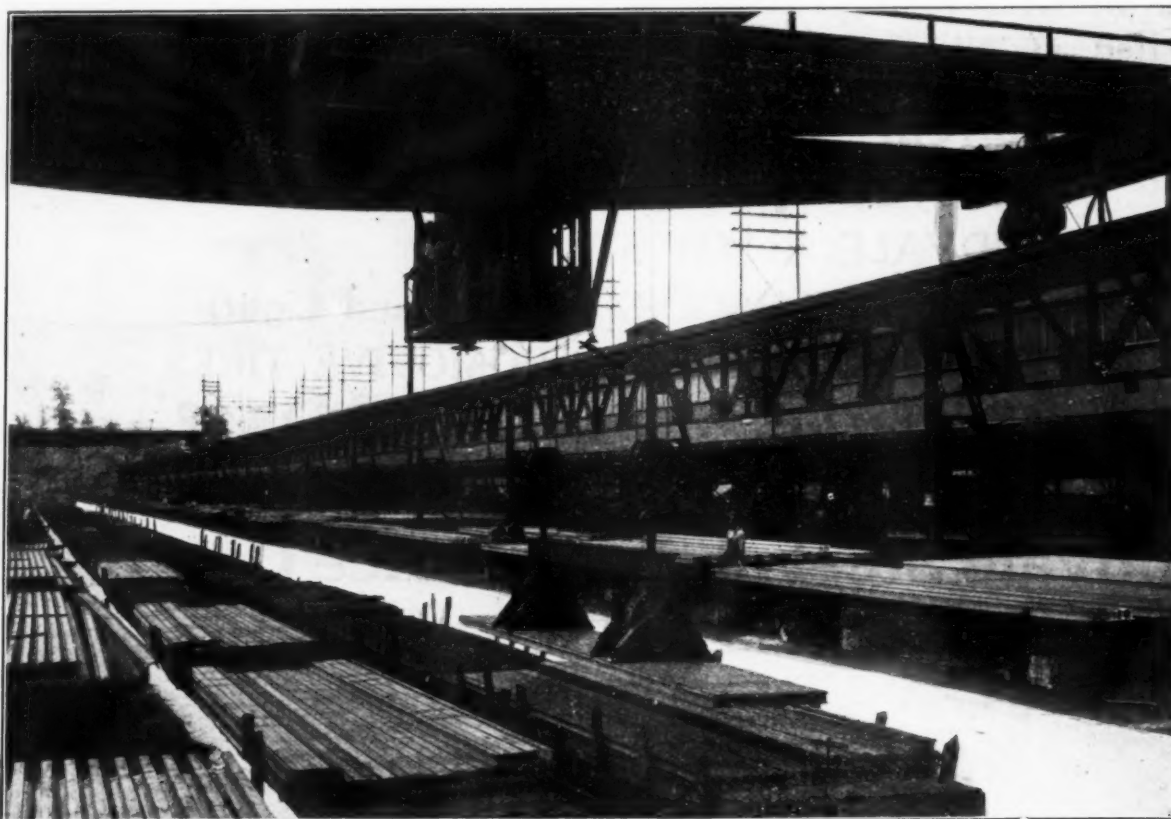
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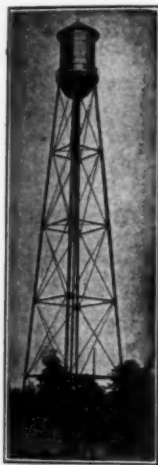
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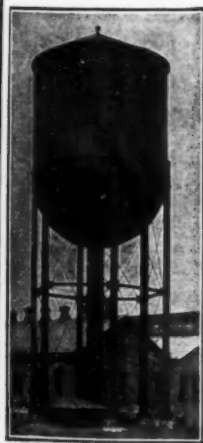
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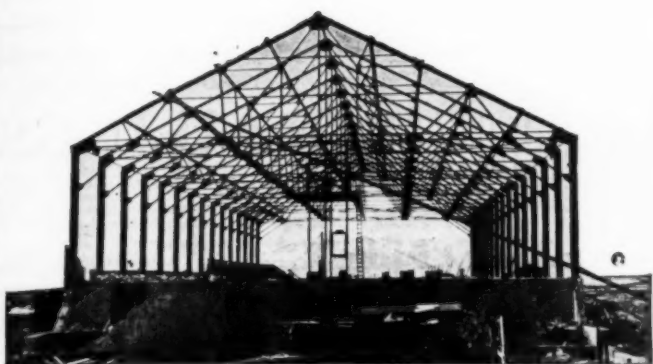
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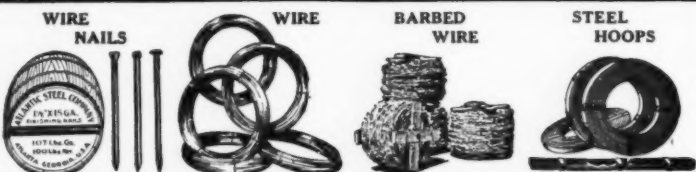
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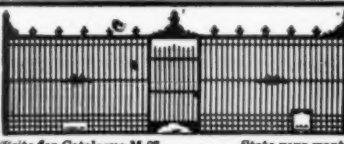
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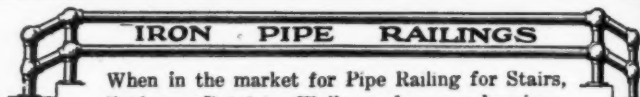


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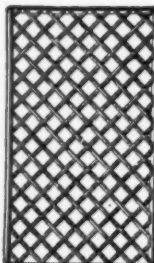
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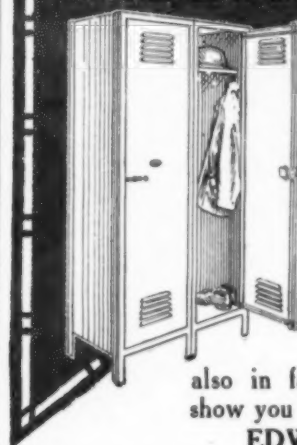
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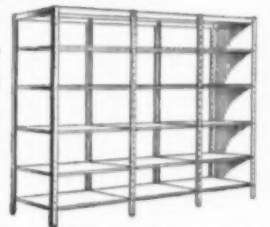
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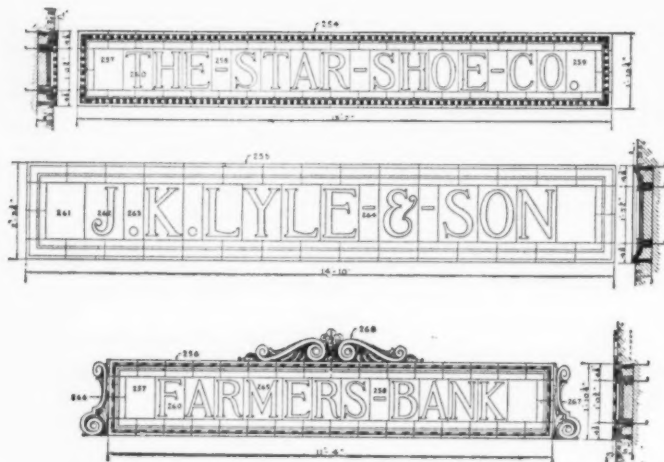
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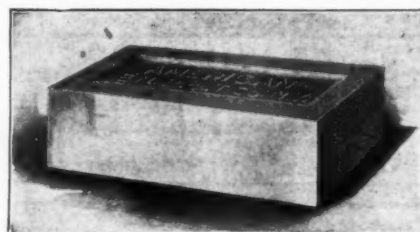
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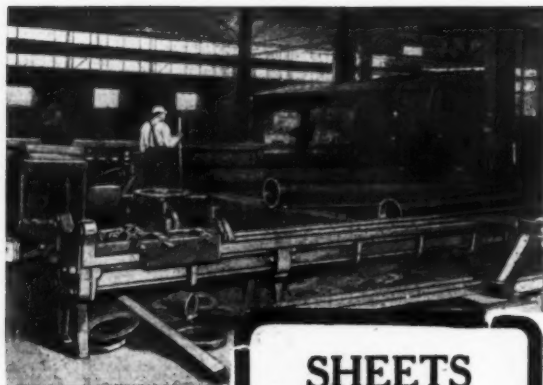
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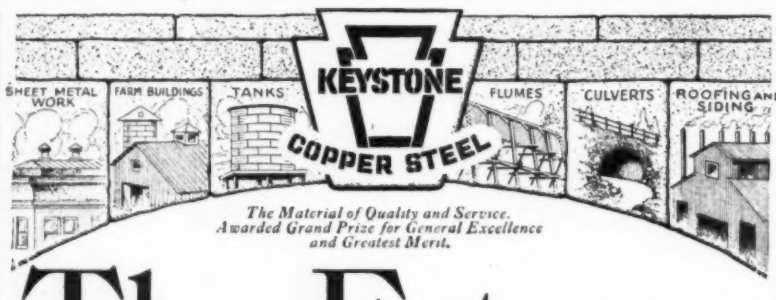
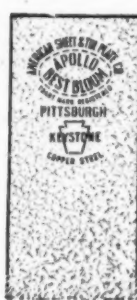
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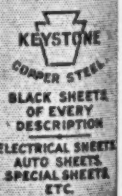
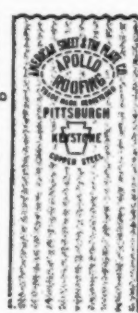
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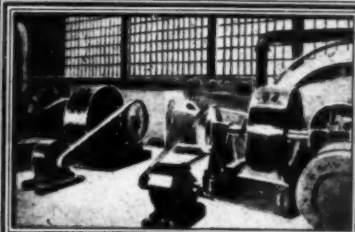
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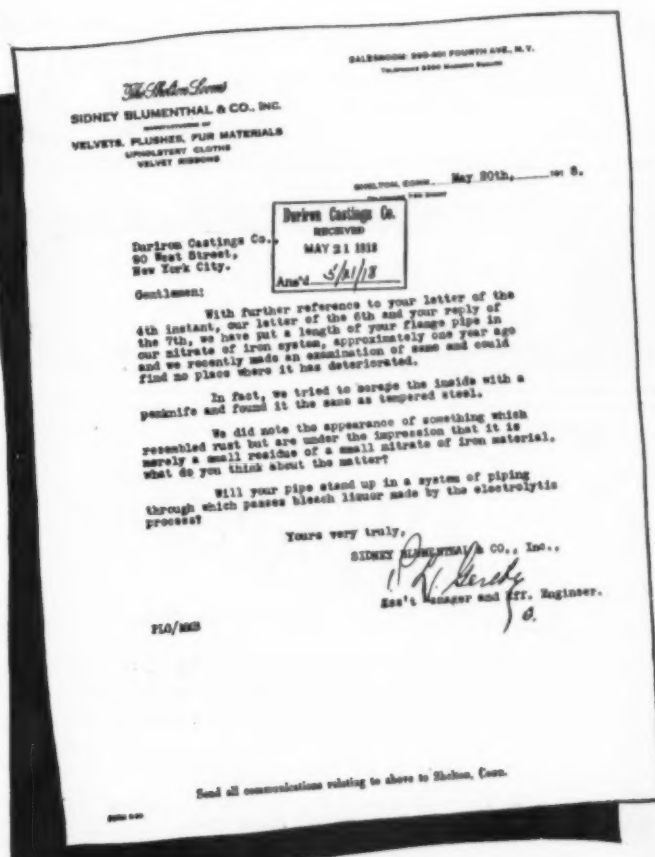
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In order to avoid delays, all correspondence pertaining to news or advertising matters should be addressed directly to the Manufacturers Record, Baltimore, Md., and not to individual editors, officers, employees or any branch office.

CABLEGRAM.

France, July 8.

Richard H. Edmonds, Baltimore:

Capt. James S. Moore died 6.50 this evening. Will be buried with full military honors Thursday. Full particulars follow by mail.

LIEUTENANT OWENS,
Chaplain Sixth Infantry.

Captain Moore was a nephew-in-law of the editor of the MANUFACTURERS RECORD, and the devotion was as of a son. He was an occasional writer for the MANUFACTURERS RECORD while on the staff of the Atlanta Journal, and was widely known throughout Georgia as a teacher, an athlete, a football player, and later through his connection with the Atlanta Journal. He received a commission as second lieutenant in the Regular Army and was rapidly promoted to a captaincy. He went to France in March, and now, like many others, has given his life for civilization.

AGRICULTURE NOW REPRESENTED ON WAR INDUSTRIES BOARD.

AGRICULTURE is to have representation in the machinery of the War Industries Board in the person of Hon. Henry G. Stuart, former Governor of Virginia and a large livestock producer in Southwestern Virginia. At a recent meeting of the executive committee of the National Agricultural Advisory Council a recommendation was made that one of its members, serving without pay, should have headquarters in Washington, so that he might keep in touch with all Government agencies dealing with agricultural matters and inform all the members of the general committee of important proposals, and secure whatever information and advice that may be desired by the Government agencies.

The executive committee also suggested that its chairman, who is also chairman of the national committee, should be placed in the machinery of the War Industries Board. This recommendation was conveyed by Secretary Houston to Chairman Baruch, who cordially assented to the proposal. The National Agricultural Advisory Council was constituted some weeks ago by Secretary Houston and Mr. Hoover to consult with the Department of Agriculture and the Food Administration from time to time concerning important problems in the field of agriculture. The members of the Council represent all sections of the United States and all phases of agriculture and livestock production.

SOME MORE DAMNING REVELATIONS OF GERMANY'S CRIMES.

IT has been known for some time that a diary kept by Dr. Wilhelm Muehlon, a former director of the Krupp works in Germany, contained notes written shortly before and immediately following the beginning of the war, which were so damning in their denunciation of Germany that he is forced to become a virtual exile, and is now living in Switzerland. As a director of Germany's great steel and ordnance plant, Dr. Muehlon came in contact with the highest Government officials. He was in the confidence of Dr. Karl Helfferich, the Imperial Vice-Chancellor, and of Dr. Krupp von Bohlen, the chief owner of the Krupp works.

The statements made by Dr. Muehlon fully corroborate the revelations of Prince Lichnowsky, the former German Ambassador to London, whose exposure stirred all Germany, and the equally damning revelations of August Thyssen, one of Germany's leading steel manufacturers.

This condemning, damning diary of German barbarity, intrigue and turpitude which knows no code of honor and morality, contains facts which the MANUFACTURERS RECORD has for over three years been preaching, viz:

That Germany was the instigator of the war.

From Dr. Muehlon's diary—July, 1914:

Austria-Hungary (with Germany's consent) wanted the rupture with Serbia with no intervention. In truth, the note contained only one-sided declarations, by no means proofs; gave no time for investigation, but demanded unconditional submission without debate. Now everyone saw clearly that Austria-Hungary would act, and that it believed it could secure respect for itself only through brutal actions.

Again on September 2, 1914, Dr. Muehlon wrote:

The German point of view that no one ought to interfere in the affairs of Vienna and Belgrade becomes still clearer as to its wickedness and treachery.

Russia's view wins very considerably in comparison to that of Germany and Austria-Hungary. Germany's efforts to reach a general understanding with England in regard to her neutrality have become known to me, and England's replies seem to me just.

That Germany ruthlessly destroyed Belgium because the General Staff decided that was the easiest way to Paris.

From Dr. Muehlon's diary—August 5, 1914:

I am just now reading the speech of the Chancellor, and a real shudder overcomes me, for there it stands: "At this very moment our troops are in Belgium. Necessity recognizes no order. We will repair this wrong."

That Germany wages war for loot and conquest.

From Dr. Muehlon's diary—August 27, 1914:

Prussia will rob anything, everything she can, in order to keep it. She will only give that for which she cares nothing, and then only at the expense of the other fellow. She will never take her foot off the neck of the conquered or the attacked. She will force every nation to venerate her barbarity. She believes only in the strong fist at home and abroad. She recognizes no other power in the world except force.

The German does not try to conquer the soul; the fact that he has conquered the country is sufficient for him. He who does not like it must emigrate, and he who does not wish to emigrate must like it.

And on September 5, 1914, Dr. Muehlon wrote in his diary:

Again a discussion of the distribution of the booty after the war. The discussion took place in confidential circles of the most prominent robbers in the great industries. I am still trembling with shame. These

modern German industrialists are repugnant to the point of nausea. Foreign property is not to be respected, especially in so far as coal and ore are concerned.

All the prominent elements of the annexed countries are immediately to be forced to emigrate if they do not submit.

That Germany is atheistic, worshipping the "German God" of force.

From Dr. Muehlon's diary—August 22, 1914:

We are being called upon to praise the German God, who will lead us victoriously across the world, for he has no better use for the garden of his creation than to make us kindle our campfires in it. A disgusting villainy and trickery lies in this governmental piety. It wants nothing less than the sanctification of falsehood, the worshiping of brutality, the divinization of Wilhelm II.

That public opinion and German thought is dominated by the military leaders.

From Dr. Muehlon's diary—August 22, 1914:

The provincial newspapers are called upon to draw their news material from the strictly controlled Berlin newspapers. The following thing is characteristic of the German dictators of the public tone: They report with satisfaction every English voice against the war, against the London Government, against the alliance with Russia and Japan; every English criticism of financial war preparedness and its effects on commerce. But they do not seem to think for a moment that even today every man may speak freely in England and must not give up that right, and that this is a proof of the greatness and safety of England. Still less do they think to allow their own population to speak freely and to convince themselves whether the German policy is right.

That German diplomats were either incompetent, colossal blunders or German diplomacy was based on deception, and absolutely controlled from Berlin.

From Dr. Muehlon's diary—August 23, 1914:

To me the Foreign Office has always seemed a confused, narrow-minded exclusive body of bureaucrats which received instructions from outside and accomplished very little on its own initiative, and so I believe that this body bears most of the guilt for the present war because of its incompetency, and not because it wanted it.

That we are fighting the whole German people.

From Dr. Muehlon's diary—August 30, 1914:

I myself have heard enough from our own officers to convince me that our soldiers are to be kept back only with difficulty, and they are plundering and setting fire also without cause and reason.

That Germans are brutal and barbarous.

From Dr. Muehlon's diary—August 25, 1914:

They are like the barbarians, who became intoxicated with victory even if their victims are entirely defenseless, and in wild joy they are distributing in their tents treasures and men as booty.

That Germany is waging a world-wide propaganda in her interest.

From Dr. Muehlon's diary—August 27, 1914:

In Germany the greatest and the most scrupulous efforts are made to gain for the German cause the Governments, the delegates, the prominent men and writers of neutral countries. As the German cause in this war is the wrong one, Germany's effort to gain supporters can only be determined as an effort toward corruption.

Dr. Muehlon only serves in this diary to prove that Thyssen and Lichnowsky were telling the truth in their revelations of Germany's unspeakable crime in starting this war.

PRESIDENT WILSON'S FOURTH OF JULY ADDRESS—ITS STRONG POINT AND ITS WEAK ONE.

IN his Fourth of July address at Mt. Vernon President Wilson said:

The Past and the Present are in deadly grapple, and the peoples of the world are being done to death between them. There can be but one issue. The settlement must be final. There can be no compromise; no halfway decision will be tolerable; no halfway decision is conceivable.

Instead of saying that "the Past and the Present are in deadly grapple," we wish Mr. Wilson had said that barbarism and civilization, atheism and Christianity are in deadly grapple. The Past and the Present do not convey to the mind of millions of people not well informed quite so strong a meaning as barbarism and civilization, atheism and Christianity. Heaven and hell. But we are glad that Mr. Wilson did emphasize the fact that there can be no compromise. That is the great issue before us. There can be but one issue, that of the destruction of Germany's power without any compromise whatsoever on our part, or the death of this nation and of all civilization. There is no middle ground. One or the other must die, and the question before us is whether barbarism or civilization shall die, whether atheism or Christianity shall rule the world; whether lustful brutes, destroying womanhood, shall dominate the earth, or whether civilization and humanity and honor of womanhood and love of the prattling babe shall rule the world.

With one statement in President Wilson's message we do not agree. Among the things which he advocated is this:

The settlement of every question, whether of territory, of sovereignty, of economic arrangement, or of political relationship, on the basis of the free acceptance of that settlement by the people immediately concerned, and not upon the basis of the material interest or advantage of any other nation or people which may desire a different settlement for the sake of its own exterior influence or mastery.

That is a position which we do not think this country has any right to assume. We do not believe that the American men and women who are giving their sons to this war are doing so for the purpose of setting up this lofty idealism; nor do we believe that the men who are engaged in this contest and are offering their lives on the battlefield are laboring under any thought that they are engaged in a war for the purpose of settling every question pertaining to territorial rights of all the nations of the earth. We cannot settle the question as to what shall constitute a "free acceptance by the people immediately concerned" of governmental and economic plans in all of Russia, nor China, nor Japan, nor India, nor South America, nor in our own Island possessions. We cannot at the moment say that if the Filipinos demanded to be freed entirely from control of the United States that it would be the part of wisdom at the moment to separate them from this country. We cannot say that if the people of St. Thomas, or of Porto Rico should prefer their own form of government that we shall immediately grant them complete independence without regard to what influence it might have upon the future of this nation. We cannot say what shall be the relation between Africa, the isles of the sea, India and Egypt and other countries. When we attempt to move into that far distant sphere we are going beyond the limit of our right and of our power.

We would regard it as a direct insult to the United States if any country on earth should say that willingly or unwillingly we must abandon the Hawaiian Islands, the Philippine Islands, Porto Rico or St. Thomas. We bought St. Thomas without any thought whatsoever as to whether the people on that island wished to be under the domination of the United States or not, and we do not believe it conceivable that this country would take the position that it must abandon this island which we bought for our own protection should its inhabitants decide that they do not want to be a part of this country.

President Wilson emphasized the fact that the question of territory, of sovereignty, of economic arrangement, or of political relationship must be

settled upon the basis of the "free acceptance of that settlement by the people immediately concerned, and not upon the basis of the material interest or advantage of any other nation or people." Under this condition if the St. Thomas Islanders desired to be an absolutely independent country, we would have no possible right to deny them that privilege. Should the Philippine Islands, and the Hawaiian Islands, and Porto Rico desire their independence, we would be compelled to grant it to them under President Wilson's plans; for we could not deny to them the right to do that which we are demanding for all the countries in the world. Indeed, broadly stated, if Alaska should vote that, since it was bought from another country, it did not desire to be a part of the United States, and desired its own independence, we would have no right to hold it under our domination.

We are afraid that Mr. Wilson ventured too far afield and permitted his dazzling power of expressive English and his idealistic imagination to go beyond the safety line, and to lead him out into the twilight zone of uncertainty and danger.

What this country, in our opinion, is called upon to do is not to lay down theories as to the government of other countries nor to state the terms upon which all the nations of the earth shall adjust their affairs. We do not understand that this is the thing for which we are fighting. What we are fighting for is to save ourselves from destruction by an enemy, the barbarism of Germany, and to destroy that particular barbarism so that it may never again drench the world in blood. But we are not called upon at the present time to set up for all the world an idealism and a Utopia beyond the power of mankind so long as the world is composed of divergent influences, and until humanity has reached the point where the lamb and lion lie down together in peace. Beautiful in theory, but evanescent in this world of realities, is Mr. Wilson's plan for settling all the problems of the earth on the basis of "the free acceptance by the people immediately concerned."

WAR TO THE LAST OUNCE OF OUR POWER MUST BE OUR SUPREME TASK

IF we had not become so blunted in our sensibilities by Germany's continued atrocities, all the world would have been horrified beyond the power of expression by the recent deliberate sinking of the hospital ship Llandovery Castle, and the cold-blooded murder of the nurses and others on board.

Sergeant Knight of the Canadian Ambulance Corps, who was one of the survivors of the Llandovery Castle, in making a report to King George of England, said that the boat in which he attempted to escape had fifteen Sisters of Charity on board. The men broke all their oars in trying to keep the boat clear of the sinking ship, but as the steamer sank the lifeboat was capsized and drawn under. All of the occupants of the boat were drawn down by suction of the big steamer as it went down. Some were drowned but Sergeant Knight in some way reached the surface and floated on a piece of timber for two hours.

His statements to the King confirmed the reports of other survivors of the ramming and firing on the wreckage of other life boats by the German submarine.

It had been thought that in the sinking of the Lusitania Germany had reached the depth of human infamy on the water, but the sinking of the Llandovery Castle hospital ship surpasses even that crime which the very fiends of Hell would blush to own.

We are glad that the Army and Navy men of this country are feeling a bitter vindictive spirit which every honest-hearted man should feel against such brutes incarnate. Shortly after the sinking of this hospital ship, a few army men were gathered in a group discussing this new atrocity. One said that this Government should immediately have taken 234 German prisoners, put them on board a ship, sent it out in the ocean and torpedoed it as a retaliation. Another spoke up and said that this perchance would leave it possible for some of these men to escape and therefore was not adequate punishment, and he suggested that 234 Germans, as representing

the number of people lost on the Llandovery Castle, should have been put before the firing squad and shot to death. Another said that "both of these suggestions were entirely too mild; the Government should have put before the firing squad 2340 Germans, or ten Germans for every civilized man and woman lost on the hospital ship."

American soldiers and sailors are more and more beginning to understand the character of the nation with which we are at war, and they are beginning, we believe, to understand that this is not a short war. They realize that Germany's military machine has not been broken, that it is still tremendously powerful, that in all human probability this war will last for two or three years and possibly for a longer time. They know that the utmost power of this nation will be needed to create an Army and a Navy adequate to meet the situation and to supply these men with a limitless quantity of explosives and with aeroplanes to the utmost stretch of our ability to produce, and with everything else entering into war work.

If we are to fight Germany successfully we must do it with the power of scientifically handled machinery of war, with explosives without limit and with aeroplanes which will fill the sky, and we must plan for a great army. All that we have done is small as compared with what we shall have to do. Any man who minimizes the struggle that is ahead of us or who fails to grasp its magnitude will be responsible to the extent of his influence in lengthening the war and increasing the number of deaths to our soldiers.

War, war to the very limit of human power. War to the last ounce of our strength in men and money. War with a determination that there shall be no halting whether the struggle be two years or five years, but war until the world has been avenged of the crimes of Germany against mankind, and especially its crimes against womanhood and children, war until our national existence is made safe must be our thought and our prayer by day and by night.

Not for one moment should we think of even the possibility of a short war. This is a long war, a desperate war. Germany has staked its very existence upon success. It has planned for this war through generations, and now that the contest is on, with Germany fully realizing that there will be nothing but death and destruction for its autocratic power, and punishment for its people, unless it can win, we may be assured that the people and the military power of Germany alike will carry on war to the utmost stretch of that nation's accursed ability to make war.

Let us in the light of that black crime against humanity in the murdering of the people on board a hospital ship, make to each other, to our Allies and to God himself our solemn pledge never to sheathe the word until Germany has been destroyed.

Notice to Readers.

Our readers will please bear with patience the long delays which sometimes occur in publishing accepted matter or the utilizing of suggestions which come from all parts of the country. While the Manufacturers Record welcomes suggestions on all the problems which this nation is now facing it is not possible for us to use all of these suggestions nor to publish promptly all of the accepted articles. The limit of space and of time makes it difficult to meet all of these conditions.

Our readers are also asked to remember that the delays which often take place in the delivery of the paper are not due to our office, but to the congestion of business in the postoffices and on the railroads.

On and after August 1 subscription price will be \$6.50 per year in the United States.

July 11, 1918.]

The Railroad Administration's Mistake in Stopping Industrial and Agricultural Development Work in Contrast With Enlarged Activities by Canadian Railroads.

CANADA is preparing to make a large exhibit of its raw materials for chemical and other industries at the National Chemical Exposition at New York in September.

By action of the United States Railroad Administration, American railroads are denied the privilege of making similar exhibits.

Canadian railroads are spending an enormous amount of money in advertising throughout the United States for settlers. Through farm papers and other journals of large circulation, Canadian railroads are wisely calling attention to the opportunities of that country.

By the direction of the Railroad Administration, American railroads are forbidden to continue their agricultural and industrial activities.

These facts demand the attention of the Railroad Administration and of all other people interested in the welfare of our country. Recently a large number of Senators of the South and Southwest sought to impress upon the Railroad Administration the mistake that was being made in curtailing the activities of railroad agricultural and industrial bureaus, but we cannot learn that the advice of these Senators, who see with alarm that the curtailing of this work means national disaster in lessening the development of the industrial and agricultural resources of the South and Southwest, has yet had any material effect.

Men who have given all their lives to the study of the resources of the South and Southwest as agents of railroad bureaus are now seeking other employment. This is on a par with what would have been folly, if we had been guilty of it at the beginning of the war, of disbanding the entire Regular Army and thus losing the efficiency and the power of the men who had been trained in military work. The world would naturally have held up its hands in horror at the unspeakable folly of disorganizing and disbanding our military forces with a view to creating some new form or organization to carry on our fighting. But such a policy would not have been more unwise, though it would of course have been on a larger scale of disaster to the country, than is that policy which has been put into effect to curtail or discontinue entirely the splendid work which men trained through the last 25 or 30 years have been doing for the utilization of the resources of the South and Southwest for the things which make for the winning of the war.

No organization could possibly be formed by the National Government which would be as effective as were these organizations. They were officered by men of ability, and of broad knowledge of the South based on personal investigation. They were in touch with the forces of the whole country that look to the utilization of Southern soil and Southern raw materials. They were in effect the well-trained regular army disciplined through years of work to know exactly how to carry on the battle for the development of the things which make for the feeding and the fighting power of the country. But a narrow-minded view, apparently based on a spirit of false economy, disbands this army of trained men and throws away the splendid work of the last 25 years and destroys the plant which had been created for doing things which the nation needs.

The excuses that have been made by the Railroad Administration show an absolute lack of knowledge of the whole situation. They indicate that the men responsible for the handling of this part of the Railroad Administration's program have no adequate grasp of the conditions which the nation faces.

Congress is being asked to appropriate millions of dollars to investigate and exploit the mineral resources of the country in order to lessen our dependence on foreign countries and at the same

time to save the shipping that is now needed to bring these materials from other lands.

The best fitted organizations in America for doing this work were the railroad bureaus of industrial and agricultural work. In these bureaus there were men familiar with every line of mineral resources, and with practically every foot of soil for agricultural advancement. They had the confidence of the local people and the confidence of investors and investigators from other sections. They were the trained army equipped for immediate work, and yet upon their work the railroads of the South and Southwest had been spending each year a beggarly sum of about \$600,000 only. Never has so small a sum in any other way accomplished elsewhere such great results, but now it is to be stopped on the plea of economy, or of concentration of the work in the hands of the Government bureaus, or on the plea that there must be no competition between railroads for the development of industries, or on the plea that no industries must be established except by direction of the Government. These and others are some of the excuses that have been heard, and in not a single one of them is there the foundation of good judgment.

Creative work is discouraged and the nation is made to suffer. With proper support by the Railroad Administration these forces in the field, working each in his own territory, could have hunted out without duplication of effort every foot of ground for manganese and for other materials which are essential to the winning of the war. The \$600,000 which the railroads had been spending could very wisely have been doubled and trebled by the Railroad Administration acting through these railroad bureaus, and this investment would have been worth hundreds of millions of dollars to the country and perhaps hundreds of thousands of lives of our soldiers saved.

War, like time and tide, waits on no man. Every hour lost means the death of many men. But the Railroad Administration instead of utilizing the forces, the trained army of men in this work, has failed to realize in the meaning of the war the supreme importance of carrying on the campaign for discovering and utilizing the raw materials, and, therefore, goes directly contrary to that wiser policy which Canadian railroads are pursuing.

These Canadian railroads have displayed great judgment, long-headed foresightedness and courage; our Railroad Administration has in respect to this work displayed the opposite qualities.

Take, for instance, the National Exposition of Chemical Industries, which has heretofore given to the South an opportunity to show its great resources in raw materials to all of the leading chemists, scientists and manufacturers in the country. In this respect this exposition has been invaluable to the nation. It is almost incomprehensible that this exposition should not again be utilized to stimulate the people of the South and Southwest to dig deep into their treasury of raw materials and carry the samples to this exposition that the chemists and engineers and capitalists of the country might see how to find the raw materials which enter into the nation's war activities—the utilization of which would save many thousand tons of shipping, but the Railroad Administration denies to the railroads the privilege of doing this while Canada eagerly grasps at the opportunity.

We are advised that the Canadian people are giving thought and attention to having even a more elaborate exhibit this year at the exposition than they had last year. This country, on the contrary, takes the opposite position and decides against any exhibits.

Unless the Railroad Administration radically changes its present view it will be too late to accomplish anything, and besides the space which had been contracted for by Southern railroads will have been sold to other exhibitors.

The decision not to be represented at the exposi-

tion by the railroads of the South and Southwest, under the instructions of the Railroad Administration, which denies them the privilege of carrying on their industrial bureaus, is only one indication of the very great and grave menace to the broadest utilization of the resources of these sections.

The twenty-five or more Southern and Southwestern Senators who pressed some of these facts upon the Railroad Administration deserve the hearty commendation of the whole country, but they have not yet won their fight.

Bearing on this matter, the following letter was recently sent to Director-General McAdoo:

Baltimore, Md., July 3, 1918.

Hon. William G. McAdoo,
Director-General of Railroads,
Washington, D. C.:

My Dear Mr. McAdoo—Merely that this letter may go through the proper channel I am addressing it to you, though I know you are in the West.

The very great importance of the continuation of the agricultural and industrial bureaus of the railroads of the South and Southwest was recently pressed upon your attention by the Senators of those States. I cannot too strongly endorse what they said. I am not speaking with reference to any particular organization or the work which it has done, but to the entire broad campaign of industrial and agricultural development through the work of the industrial bureaus of these Southern roads, and in this I of course include the Southwest.

These bureaus have done a tremendous work for the welfare of the nation. I do not hesitate to say that the wisest move which the Railroad Administration could possibly have made for the development of the things which make for the winning of the war would have been to double and treble the amount of money expended in this campaign by the railroads of the South and Southwest. These men were, in effect, the trained army, long tested and tried. They knew the South and Southwest and were in a position to hunt out all of the minerals needed for the winning of the war. They knew where to turn new fields into the production of foodstuffs, and they knew how to encourage the farmers along their lines to raise more foodstuffs. It is absolutely impossible for any department of the Government to match in efficiency and in results the work which has been done during the last 20 years by these railroad bureaus. But in refusing the permission to railroads to continue this expenditure you have caused to be disbanded an army of trained men. You have thrown away a plant capable of producing the very things which the nation needs in its war work. You have gone directly contrary to that wise policy of Canadian railroads which is causing them to spend more money than ever in advertising throughout America to attract settlers to Canada, and directly contrary to the policy of Canada in preparing to make big exhibits of its raw materials at the National Chemical Exposition this fall, when Southern railroads are denied the privilege of making such exhibits, for which they had already contracted for the space. The success of their exhibits in the past had been such as to make them see that an enormous benefit to be rendered to the nation by presenting the raw materials of the South to the chemists and the engineers and the manufacturers which at this exposition make a close study of all the raw materials exhibited in order to learn where and to what extent they can be found.

I can fully appreciate the tremendous burden of responsibility that rests upon you and your associates in the Railroad Administration. I can fully understand that you have not been able to take a broad survey of all of the factors which enter into the utilization of the great stores of raw materials which can be developed, and thus lessen our dependence upon other nations and lessen the demand for shipping to bring these raw materials from other countries. Nevertheless, it has seemed to me that no one at all familiar with all of these conditions could give the subject one hour's study without realizing that instead of curtailing this work, the wisest possible course would have been to authorize these railroad bureaus to increase their force and thus increase their investigation of these raw materials and help to carry on with still broader activities the utilization of the soil of the South and Southwest for producing the foodstuffs in variety and quantity so sadly needed.

I earnestly beg that in the interest of the nation's life you will reverse the policy which you have taken and instruct the railway managers of the South and Southwest to continue this work more vigorously than in the past by having a larger fund at their disposal for that purpose.

Very truly yours,
RICHARD H. EDMONDS,
Editor.

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A GREAT ECONOMIC ISSUE WHICH THE NATION FACES

HOW HURLEY AND COLBY OF SHIPPING BOARD GOT BADLY ENTANGLED IN THE LIQUOR FIGHT AND HOW PROHIBITION INCREASES OUR POWER TO BUILD SHIPS

AS an economic factor, pure and simple, and ignoring entirely, for the time being, the moral issue, prohibition is a dominant—if not the dominant question before America today.

National prohibition rigidly enforced would mean enlarged production of foodstuffs, of ships, of iron and steel, of coal, and greater efficiency in every activity of the nation in civil as well as in army work.

Mr. Hurley and Mr. Colby of the United States Shipping Board, in attacking national prohibition, opened themselves to a reply which left them without a single fact on which to base their theories. When they attacked prohibition on the ground that it would lessen the efficiency of the shipbuilders of the country, they demonstrated that, like many other people, they were talking about things of which they were wholly ignorant, or else they were suppressing important information, and the answer came back in such an overwhelming way as probably to make them think twice hereafter before they speak again.

They said that prohibition would injure the efficiency of shipbuilders, and they must have hung their heads in chagrin and mortification when the testimony came back from every direction that wherever prohibition prevailed, shipbuilding efficiency, even by their own admission, had been greatly increased.

Before the Senate Committee, Mr. Hurley, Mr. Colby and some lawyers representing the Shipping Board, with Samuel Gompers and Postmaster-General Burleson (all of whom should have been more wisely engaged, for they were all there fighting to maintain the liquor interests), met their Waterloo. Mr. Hurley was called upon to read a telegram signed by Mr. J. R. Russell, head of the Great Lakes shipbuilding plant at Detroit, in which Mr. Russell said that their experience with prohibition in Detroit convinced him that prohibition was immensely beneficial and even essential to the success of the war shipping program.

In the course of the testimony, Senator Kenyon asked Mr. Hurley:

"Do you publish the Emergency Fleet News?"

"Yes," he replied.

"Then statements therein are reliable?"

"They should be."

"I want to read from some issues of that paper," continued Senator Kenyon, "and as I read I want you to remember that the Pacific Coast shipbuilding yards are practically all under prohibition. Here is the issue for March 11. It says 'West Still Sets the Pace for Country.' Another issue has the head, 'Workers on Coast Show Fine Spirit.' The April 20th issue says, 'Pacific Riveters Lead in Averages.' The May 6th issue has a table showing the 25 ships built in the shortest time, and I find that the records were held by Skinner & Eddy in the prohibition State of Washington, and by the Union Iron Works, also out that way."

Mr. Hurley admitted that efficiency in the dry States was at top notch, but said that the workmen in those yards were Americans. It was revealed that 125,265 ship workers are in dry territory and 200,157 in wet.

Again Mr. Hurley was questioned:

"Isn't Mr. Piez at the head of your Emergency Fleet Corporation?"

"He is the Vice-President."

Testimony by Mr. Piez before the Appropriations Committee of the House of Representatives was read. This was to the effect that on the Pacific Coast, under prohibition, the workers have shown a ton output of 20 as compared with 16 for the wet Eastern yards and 10 for England.

Again Mr. Hurley impressed the fact that he was only stating an opinion. "There is no doubt of the efficiency of workmen in dry territory," he said. It was also brought out that many ex-bartenders and saloonkeepers were now building ships in dry territory and getting top wages. Mr. Hurley said that many of the men were making from \$50 to \$75 per week. "And yet you still think that they would be disaffected if their beer were taken away from them," remarked a Senator.

Postmaster-General Burleson testified only because he had been "smoked out." He had been working against the measure behind the scenes, and it was demanded that he come out into the open. His testimony hurt the wet case greatly.

Gompers made one of his characteristic pro-brewery

speeches, expressing the opinion that we must cater to the opinion of those of Teutonic blood in our midst. "They must have their beer," he declared. While he was on his feet a telegram from the representatives of 600,000 trades-unionists, petitioning for prohibition, came to the committee.

Mr. Colby of the Shipping Board expressed great regret because his testimony for the wets appeared in the Washington papers as an advertisement. He said that the Washington Post had informed him that the Washington Times had sent the ad over and that it had been paid for by "Bob" Crain. The Times is a violent pro-beer organ, and Crain is a brewery attorney.

Detroit, the largest city in America under prohibition, is one of the greatest industrial centers of America. What effect prohibition has had on the efficiency of labor in that community is strikingly shown by a letter signed by a large number of the leading manufacturers of that great center of industry. Mr. Hurley and Mr. Colby and Postmaster-General Burleson and Mr. Gompers must surely have felt like retiring into some deep cavern when the following statement was presented from Detroit:

June 22, 1918.

Dear Sir—Statement re Jones amendment to Agricultural Appropriation Bill:

We have been informed that Hon. E. N. Hurley, chairman of the Shipping Board, thinks that war prohibition will disorganize labor activities in shipbuilding plants. And the newspapers report that Hon. Bainbridge Colby of the Shipping Board has appeared before the Senate Agricultural Committee to protest against the enactment of war prohibition on the same ground.

Detroit is the largest city in America under prohibition. The prohibition law went into effect here on May 1 of this year. A great number of our leading concerns are working on immense contracts for war material. It will therefore be seen that the experience of our large industries as touching the point raised in the objection of the Shipping Board to prohibition is not only valuable, but conclusive on this point.

There is no division of opinion among our leaders. They are unanimous in giving emphatic testimony to the wonderful benefits prohibition is producing. Our big concerns are reporting fewer absentees of men, fewer accidents, greater unity and higher efficiency on the part of their employes. Their men come to work now with clear heads and steady hands on Monday mornings and after holidays.

Detroit's experience has proven beyond a possibility of doubt that the wage-earners do not insist on their beer as the price of their loyalty, and that instead of prohibition causing any industrial revolution or disorganization, it, on the other hand, is a most valuable contribution to industrial efficiency, higher productivity and conservation of man-power, all of which are of very vital consideration to our country in these war times.

If the Shipping Board and others who object to war emergency prohibition on the ground that it will cause disorganization of labor or revolution among industrial workers will but study the experience of Detroit, they will find that their anxiety on this matter is totally unfounded. After an unexcelled opportunity of studying the value of prohibition in its relation to industrial efficiency, our conviction is that no measure of conservation would be more valuable to our country and its interests at this time than war emergency prohibition.

We therefore respectfully submit these considerations and appeal to our National Congress for early favorable action in behalf of this legislation.

Yours very truly,

HENRY M. LELAND,
President Lincoln Motor Car Co.
JOSEPH BOYER,
President Burroughs Adding Machine Co.
F. S. BIGLER,
Treas. and Gen. Mgr. Michigan Bolt & Nut Co.
A. R. DEMORY,
Vice-President The Timken Detroit Axle Co.
S. S. KRESGE,
President S. S. Kresge Co.
JOHN THIX,
President American Injector Co.
FRANK P. JOHNSON,
President Detroit Screw Works.
F. F. BEALL,
Vice-President Packard Motor Car Co.
RICHARD H. WEBBER,
President J. L. Hudson Co.
CHAS. M. CARSON,
Manager Cadillac Motor Car Co.
RICHARD H. SCOTT,
V.-P. and Gen. Mgr. Reo Motor Car Co.
CHESTER M. CULVER,
Secy. Employers' Association of Detroit.

But Detroit was not the only city to come to the front with such statements. Dr. Haverall Sheppard of the National Service Section of the United States Shipping Board, Emergency Fleet Corporation, testified, in a statement made on the Pacific Coast, directly contrary to the claims made by Mr. Colby and Mr. Hurley. He said:

Fifty per cent. shipyards in United States are in prohibition territory. Mr. Colby's statement is a slur on the men in these yards. The president of a shipbuilding company in a rum-soaked city said to me: "We had a launching here last Sunday, for which we paid double time; 30 per cent. of our men did not show up on Monday; 26 per cent. were out Tuesday; and on Wednesday 16 per cent. were absent. What shall we do?" I said to him, "Shut the saloons."

Query: What answer will Mr. Colby and Mr. Hurley make to Dr. Sheppard of their own Shipping Board?

The Seattle Daily Times came to the front with the following statement as to what prohibition does for shipbuilding:

Seattle produced more than 26½ per cent. of the total dead weight tonnage in ships delivered to Uncle Sam in the first five months of the year.

The whole country's total deliveries to Uncle Sam aggregated 805,000 dead weight tons.

Of the total Seattle delivered 217,300 dead weight tons.

Thus, in the first five months Seattle was more than one-fourth of Uncle Sam's entire shipbuilding industry so far as concerned results.

The pace-making world champions of the Skinner & Eddy plant alone produced almost one-eighth of the total tonnage delivered to Uncle Sam. The world-famed plant delivered exactly 98,000 dead weight tons out of the grand total of 805,000.

"Thus, Seattle and Skinner & Eddy champions continue to be Uncle Sam's 'white hope,' the term used by Chairman E. N. Hurley of the United States Shipping Board.

From Portland, Ore., came a telegram which reported that Oregon had produced "one-sixth of the tonnage required by the Shipping Board this year," and that "Portland was turning out a large number of boilers for steel steamers for Government than any other port on the Coast;" that "Portland holds the world's record in building complete steel ship ready for cargo, and the shortest time also for fastest wooden ship;" "over 36,000 men directly employed in Oregon shipyards, with a payroll of this year conservatively estimated at almost \$42,000,000."

The shipbuilding industry in Oregon which has reached these enormous proportions is a new creation since prohibition became effective, and to this was added:

Statement prohibition will reduce efficiency of American labor insult to American labor and manhood and Oregon is proving it.

From W. H. Paul Mamus, Senator Jones received a telegram which said:

Statement of Bainbridge Colby that elimination of beer will reduce efficiency 25 per cent. is absurd. Our experience in this State proves conclusively that it will increase their efficiency fully 25 per cent. We are building ships out here and are in position to know. Prohibition has proven greatest possible help to manufacturing plants of every kind. When prohibition was under consideration 90 per cent. of our business was opposed account honestly believing it would be harmful. After fair trial fully 95 per cent. heartily approve. Eliminating liquor is patriotic duty.

There was also a telegram to Mr. C. E. Dineen, die, one of the active workers in this prohibition fight, in which the following statement was made as to prohibition conditions in the Northwest:

Replying to your telegrams of yesterday, forwarded from Seattle: Today's publication Bainbridge Colby statement aroused immediate, continuing ridicule; condemnation unanimous. Editorial expressions leading newspapers of Pacific Northwest branded absurdly contrary to all facts, experience, common sense. Washington and Oregon shipyards, employing 50,000 workmen absolute prohibition conditions, under State-wide and Federal laws preventing manufacture, sale, importation all alcoholic beverages, have delivered since January

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one-fourth all completed American tonnage. Skinner & Eddy, largest Seattle yards, employing 12,000, with bone-dry environment, are recognized and proclaimed by Shipping Board as setting shipbuilding pace for nation. Especially refer recent public statement Chairman Hurley to effect that output Pacific yards average rate 20 tons annually per workman, compared 16 tons Eastern yards, showing 25 per cent. larger production capacity workman. Comparison was without reference contrasting environment, but considering Washington-Oregon yards largely exceed California capacity and output rate, necessary inference of prohibition benefits compared Eastern yards, saloon environment, becomes most emphatic. Any suggestions productive capacity workmen larger with beer supply facilities than with present prohibition States would insult shipyard workmen and defy common intelligence, only possible result being to injure industry for benefit brewery profiteers. If Shipping Board should seriously propose such reversal here it would arouse overwhelming protest from all classes of people and destroy confidence in shipping administration, now unlimited. Fortunately, Colby statement considered thoroughly extravagant individual expression, based on personal prejudice against prohibition and not representing deliberate judgment of Shipping Board. Securing expression prohibition from Washington and Oregon shipbuilding concerns seems surplusage. Proposition axiomatic, truth supported by overwhelming demonstration of experience. Pacific Northwest concerns asking authorized expressions for committee hearing.

Similar testimony comes from the shipbuilders of Maine, as shown in the following striking facts against the unsupported theories of Mr. Colby and Mr. Hurley, who have both done themselves irreparable harm. The statement as submitted to the Senate Committee from Maine was as follows:

Portland, Me., June 21, 1918.

Rev. Edwin C. Dinwiddie,

30-33 Bliss Bldg., Washington, D. C.:

My Dear Mr. Dinwiddie—Frank A. Rumer, President and Superintendent of Construction of the Portland Ship Ceiling Company, Portland, Me., says:

"In a crew of 600 men we have the least trouble with the use of intoxicating liquors under prohibition enforcement. We have had only one or two instances, and that where a pocket peddler got into the yards. We stopped that. The men are free from it, and the thing we need in shipbuilding is to leave it alone. I do not believe in using liquor of any kind, as it cuts down efficiency. From long experience in the building business I can testify that liquor in any form very materially cuts down efficiency in the men using it."

Sheriff Wilbur C. Oliver of Bath, Me., Sheriff of Sagadahoc county, says:

"There is abundant testimony that enforced prohibition is a benefit to workmen employed in shipyards and any other line of work. The late John S. Hyde, for many years president of the Bath Iron Works, held the opinion for a time that his men must have whiskey and beer. After I had enforced the law for 20 months he came to me and said that he was wrong in his former opinion, and that prohibition was the best thing that ever happened for Bath, and that he favored prohibition. He did all he could for prohibition. I know of no shipbuilding concerns that favor liquors for their men."

Harry Sawyer, manager of the Kelley-Spear Company, shipbuilders in Bath, says:

"Our experience has been that the men are better off when prohibition is enforced. When liquors could be secured a smaller number of our men were at work on Monday morning; now they are all on hand. Their families dress better and they are happier under prohibition enforced. It tends to greater efficiency in every way. We have never felt that there was any need of their having intoxicants, not even beer."

Hon. William T. Cobb, former Governor of Maine, and now president of the great shipbuilding concern known as the Bath Iron Works, of Bath, Me., says:

"Entirely irrespective of the merits of prohibition as an issue, I should be very sorry to see liquor of any kind sold, as it decreases the efficiency of the men."

The gentlemen whose statements are quoted are all well-known, responsible citizens of this State, and what they might have to say upon any subject would be accepted by all who know them.

Very truly yours,

FRED N. DOW.

It would certainly seem that, in the light of these facts, Mr. Hurley and Mr. Colby owe an apology to the nation and pre-eminently an apology to the workmen in the shipyards of the nation. Mr. Burleson demonstrated his pre-eminent unfitness for his position as Postmaster-General when he entered the list of active workers in behalf of the liquor trade. Of Samuel Gompers it is needless to speak. He has no right to pose as the leader of the American working people, and no right to be regarded by the National Government as representing the best interests of the laboring people of this country.

The facts presented were so overwhelming that the liquor interests were left metaphorically high

and dry without an argument for their wet stuff. Then came along Josephus Daniels, Secretary of the Navy, once decried and discredited by many people throughout this country because he was fighting the liquor traffic, but now recognized as one of the few really great men in a Cabinet noted for some small men. He gave some testimony as to the effect of prohibition on naval employes and on the construction work under the Navy, which should be accepted by the nation as final and overwhelming proof of the value of prohibition from an economic standpoint in helping us to win the war.

Mr. Daniels said the experience of the navy is that the so-called dry order improved the efficiency in every particular and that, while many officers in the navy did not at first approve the order, there is a very small per cent. today who would ever want to go back to the old rule. The great bulk of men employed in ship construction are capable and superbly efficient men wherever they work.

"In every case where we have a shipyard or a community turned from open saloons to prohibition there is increased efficiency and immediate improvement. In Newport we have a large plant where we make torpedoes. They are both important places and very efficient. Last year we had 20,000 men under training at Newport. We had about 3000 men making torpedoes. Conditions were so deplorable that I had not one but scores and hundreds of letters from fathers and mothers of boys, who were being trained in Newport, protesting that something ought to be done."

Captain Bryan, to whom was assigned the question of investigating these matters, earnestly recommended the five-mile zone. Captain Beech, who was the commandant of the torpedo works, and to whom is given the duty of making torpedoes, the most efficient war instruments in this world, wrote not only once but several times and earnestly appealed to have a five-mile zone in that district, because he thought that if one or two or three men at the factory should become intoxicated, something might happen to the works, and he regarded it as the best influence for the carrying on of this important industry that a dry zone should be created around Newport. This was done, and some of the people who opposed it, some people who doubted the wisdom of it, believe that it was a wise act. There was not a skilled workman or an unskilled workman in Newport, whether he believed in it or not, who has not said by his acts, "I am just as willing to make a sacrifice if need be for the war as I expect my brother in uniform to make."

"The establishment of the dry zone at Newport," said Secretary Daniels, "increased the efficiency of the yard."

The commandant at Mare Island Navy Yard, Captain Harry George, recommended a five-mile zone district at that point in order to protect the enlisted men who were under training, and also to make a better condition for the men who were working in the shipyard. There were many protests from Mayor Ryland against such an order, and it was claimed that if put into effect the men employed in the shipyards at Mare Island would resent it and the product would be decreased.

After an investigation made by several officers and others the order was issued. Today the very men, or many of them, who protested against this order approve it. The efficiency of that yard has steadily improved. It was excellent then, and the great mass of men who work in that yard were sober and temperate men, but the temptation of saloons at the door of the yard did cause some of the young men to drink, whose efficiency was thereby impaired.

We have increased our men at Mare Island in the last four months by 400. The other day we launched a destroyer from the Mare Island Navy-yard which broke the world's record in time of construction, much of the work on it having been done since Mare Island became a dry district. Perhaps there was no town in America where there were so many saloons in proportion to the population, or where the conditions were more wretched. The brewing interests seemed to dominate the city government. To appeals for some measure of cleaning up the city they turned a deaf ear, and conditions were so deplorable that it was a crime to let them continue. Since the dry order was established there has been a revolution in these conditions, and mothers all over the country who have given up their boys for training have lost their alarm and the efficiency of the yard is steadily improving."

Discussing the question as to the effect of prohibition on foreigners, Mr. Daniels said:

My observation on that would probably be drawn largely from the coal fields of West Virginia, Kentucky and other sections where there is a larger foreign population than anywhere else. When Prohibition was put into effect in West Virginia and other coal fields the prediction was freely made that it would result in inefficiency, and that the foreign-born people would so protest against the taking away of what they call their liberties that the mines would lose in production. But if you would submit the question to the people in that

country now it would be carried by a so much larger majority than before that there would be no question about it. My experience in navy-yards and in private yards building ships for the navy proves this assertion.

I have found that in this war there is no difference between men in uniform and men out of uniform in supporting the war, and that it is a misunderstanding of the spirit of the men in the navy-yards or other shipbuilding yards, or in munition plants, to think they would stop their work or lessen their work by reason of such legislation. I know them very well. I am in very close touch with them. I visit nearly every navy-yard of this nation every year. I know the spirit of the men. I know their feeling. You can go into any navy-yard on the Atlantic Coast and you will find men who would like to have prohibition and men who are opposed to it. You will find varying views from lawyers or doctors or business men, but the opinion that production would be decided by their position is contrary to all experience. Experience is that efficiency is increased. One ounce of experience is worth a pound of opinion.

This last sentence of Secretary Daniels, "One ounce of experience is worth a pound of opinion," must have been like gall and wormwood to Mr. Hurley and Mr. Colby, who had to admit that they knew nothing about the subject from experience, and were simply expressing an opinion.

Mr. Daniels suggested that when 2,000,000 soldiers cannot buy a drink, and that if anybody serves it to one of them he becomes a criminal, and that when the 440,000 men in the Navy cannot buy drinks, that he does not think that we are encroaching upon any right of a citizen if we impose the same condition on him during the war. And to this he added:

In my judgment we ought not during the war to use a bushel of wheat for anything except a prime necessity, whether it is drink or eating. We ought not to use a car in America for anything except to win the war, and every man employed in the industry of producing alcoholic drinks is employed in a business that is not essential, to put it at the very best. In my judgment it is a business that lessens efficiency.

If you say you must have saloons at the doors of the navy-yards, then you ought not to say that a man who is fighting should not have it to make efficiency, because we want to win the war. The same principle prevails everywhere, and ought to prevail everywhere during the war.

Discussing prohibition as it bears on the work in the navy gun factory in Washington, Secretary Daniels said:

We have here in Washington a navy gun factory that will soon be one of the biggest gun factories in the world. We have increased the number of men during the last six months over 2000. The efficiency of that yard has steadily improved since Congress made it dry. We have not heard a criticism or a word from any man in that yard against that action. Nobody has quit work and no man has decreased his efficiency. I never knew a man who drank a long while who could do anything as well as he could have done his work if he did not drink. Total abstinence brings the most efficiency everywhere. No man on an American naval ship anywhere can either carry alcoholic drinks or drink, and no man in the naval station can do so.

This, in brief, presents some of the striking points made by Secretary Daniels in his testimony before the Senate Committee at a time when Mr. Hurley and Mr. Colby, Postmaster Burleson and Mr. Gompers tried to stand before the American people and make a fight in behalf of the liquor trade. In the light of such overwhelming testimony by Secretary Daniels, by shipbuilders where prohibition exists, and by the great leaders in industry in Detroit, who are doing an enormous amount of Government work, who say that if the Shipping Board or others fear that prohibition will lessen efficiency they only need to study the situation in Detroit to find that their understanding is totally unfounded, the people of America should force this country to disregard the clamor of the liquor crowd.

Mr. Colby seemed greatly surprised to find that his testimony had been published in a full-page advertisement in a Washington paper, and was apparently very much disturbed to learn that Robert Crain, a Baltimore lawyer, who for years has been an attorney for the brewery interests of the country, was responsible for the payment of that advertisement.

Was Mr. Colby so innocent that he did not know that he was testifying directly in behalf of the brewery and other liquor interests, and was he so gullible as to imagine that Robert Crain, the ever-

watchful, astute, political attorney for the brewery interests, and unwisely made chairman of the National Thrift Stamps Committee for Maryland would not use every power that he could possibly bring to bear in favor of the liquor interests of the country?

Mr. Colby and Mr. Hurley have been great workers for shipbuilding, but they seriously lessened their power for good when contrary to all the evidence of yards in prohibition States they upheld the brewery interests, which are so largely pro-German in their origin and work.

Directly bearing upon prohibition as it affects shipbuilding and the statements made by Mr. Hurley and Mr. Colby is the following issued by the Board of Temperance of the Methodist Episcopal Church, in which attention is called to the fact that Mr. Hurley, as the chairman of the United States Shipping Board, and therefore having officially in his possession a telegram from shipbuilders emphasizing the importance of prohibition in increasing the efficiency of ship workers based on actual experience, he did not produce this telegram until called upon to do so.

The statement is as follows:

The prohibitionists criticised Mr. Edward N. Hurley, chairman of the United States Shipping Board, and Mr. Bainbridge Colby for saying that prohibition would decrease the output of the northeastern shipyards solely because neither Mr. Hurley nor Mr. Colby produced one iota of evidence to support their assertions. They were invited time and again to do so, but they did not quote the opinion of a single shipbuilder; they did not recite any statistics or facts that had come to their knowledge. They simply expressed an opinion and stated very clearly that it was nothing more than an opinion. The only man who dealt with facts was Secretary of the Navy Daniels, who spoke for the drys. How indefensible is the position taken by Mr. Hurley and Mr. Colby is shown by the following wire from the president of one of the greatest shipbuilding concerns in the United States. (Mr. Hurley did not produce this telegram at the hearing until he had been asked if he had received it. Then he read it):

June 22, 1918.

Mr. Edward N. Hurley, Chairman U. S. Shipping Board, Philadelphia, Pa.:

We have shipbuilding plants in Detroit, Ecorse and Ashtabula, and know positively that the morale and efficiency of our men has been improved by change from so-called wet to dry conditions. At conference today of our executive officers, general managers and superintendents of various plants, serious objections were raised by all present to modification in any way of prohibitory laws now in effect in this State. If any statutory permission is given for the sale of beer and light wines in neighborhoods of our yards it would positively impede the program for delivery of ships we have promised to the Shipping Board. Are confident large majority of our employees would concur in this expression of opinion.

Prohibition has had such signal success in benefiting ship construction in Michigan that similar legislation is absolutely required in our opinion to enable the Shipping Board to carry out its war program for output. We are firmly in favor of the Jones amendment to the food emergency bill.

Great Lakes Engineering Works.

JOHN R. RUSSELL,

President.

WHY COAL IS SCARCE.

THE United States Fuel Administration through its Anthracite Committee, composed of Jos. B. Dickson, S. D. Warriner and W. J. Richards, has issued from the Philadelphia office of this committee an important circular in regard to lessened production of anthracite and the reasons therefor. Attention is called to the steady and rapid increase in the demand for coal expressed in the strong terms "now huge in the aggregate and growing each day larger and more urgent."

The operators are given just credit for having done their utmost to increase their productive power by developing the mines with the best engineering skill, with the highest efficiency and economy in operation, and to the extent that these mines are capable of producing 20,000,000 tons more per annum than they are now yielding if the labor could be had.

There are now 144,000 miners in the anthracite field as against 177,000 before the war. The average efficiency of the mine workers, taken as a body, is much less, measured by their output per man, than it was formerly. It is stated that there are various

causes for this, one being that many men between 21 and 31, having greater physical endurance than older men, have been drafted for the army; while a considerable number of entirely new men, not familiar with mining operations, have been drawn into the field, and, therefore, they cannot produce as efficiently as the miners of long experience.

Primarily, however, the decrease of 33,000 men in this industry shows the difficult problem which faces the anthracite operators to meet the demands for coal.

The committee, in publishing these facts, has done a great service to the nation, for it shows the reasons why coal is scarce and why the operators, having done their utmost, are still unable to meet the demand. The only way in which these problems can be met must be by bringing about the increased efficiency of the miners, so that a lessened number may mine as large a quantity as the greater number produced formerly, and by this increased average output carry the total yield up to the needs of the country. At the same time coal consumers must recognize the seriousness of the situation and as far as possible adjust their plans to bring about the utmost conservation of fuel.

A FOURTH OF JULY MESSAGE TO OUR ALLIES.

Baltimore, Md., July 2.

Editor Times, London:

America will celebrate July Fourth by reconsecrating itself to the most supreme task which has ever faced civilization of ridding the world of the fearful curse of German autocratic, atheistic barbarism. If voice could be given to a message from America to our Allies I believe we would say we are coming 100,000,000 strong to take up your burden and to stand by your side as for nearly three years you carried the burden which we should have shared with you. When Germany declared war upon Belgium and France and England it declared war upon America, because it declared war upon all civilization. On the battlefield and at sea you have suffered and died for us as much as for yourselves. Every drop of blood which you shed was shed for America's salvation from German damnation as much as for your own. Upon the cross which stretches over a thousand miles of battle line millions of your loved ones with superb heroism have laid down their lives to save mankind, as nineteen hundred years ago the Son of God gave His life upon the Cross of Calvary to save men from the power of evil here and of death eternal.

On July Fourth we shall as a nation rededicate ourselves and reconsecrate all that we have in physical and spiritual power, all our resources in men and money and materials to the one supreme task of destroying that accursed beast which, clutching at your throat and at ours, has sunk deep its fangs into the heart of civilization. Not until your armies and ours, millions strong, have marched down the streets of Berlin and Vienna and Constantinople, and not until they have made the responsible leaders of these countries who have brought this awful suffering forfeit their own lives to atone for their fearful crimes, should there be one word of peace talked of with these countries. And even then there should be no peace terms given a moment's consideration which do not include the full restoration by Germany and its allies of every foot of conquered territory, including Alsace and Lorraine, and the payment of an indemnity large enough as far as money can possibly do to repay every dollar expended by all the Allies in saving civilization from German barbarism. Germany and its allies were the guilty ones. They inaugurated this campaign of world murder for world looting. The military power and the people alike were banded together in the scheme to murder millions in order to enrich themselves by looting the world. Vain would be victory by the Allies if Germany should be left in a position to again drench the world in blood, and vain would be victory if Germany's leaders should go unhung or unshot. Our hearts should be steeled against any premature peace and against the sickly, sentimental, neurotic demand for peace without punishment which will be vigorously pushed by the German propaganda throughout the world.

What I have here outlined I believe voices the growing sentiment of awakened America, which I am sure will never sheathe its sword until Germany, beaten to its knees, finding its power gone and its army routed and its people starving, seeks peace on the Allies' terms. To the accomplishment of this work America, with 100,000,000 population, with its enormous resources in raw materials and finished product, dedicates its life. This country is producing more than one-half of the iron and steel and coal of the world; more than 60 per cent. of the world's oil and nearly two-thirds of its cotton, and has nearly one-half of the world's railway mileage. But it has scarcely begun to scratch the ground in its work of development as measured by its potentialities. It throws into the contest this tremendous industrial and financial power and dedicates its life to the last ounce of physical, moral and financial

strength to the task which faces all civilization. As a nation we waited long when we should have been with you in the struggle from the beginning. But we shall seek to atone by the vigor of our action for our delay. On July Fourth we shall not give ourselves to vain glorious boasting, but reverently, solemnly as a nation rededicate ourselves to the task to which Almighty God has called our country to share with the Allies of Europe in the struggle of civilization against barbarism, of Christianity against atheism.

RICHARD H. EDMONDS,
Editor Manufacturers Record.

In reply Lord Northcliffe, owner of the Times, cabled that the message had been widely printed and appreciated.

This cable to the London Times and a somewhat similar one to General Pershing were sent with the thought that every word of cheer and encouragement to our Allies and to our own soldiers heartens and strengthens them in their gigantic task.

On and after August 1 subscription price will be \$6.50 per year in the United States.

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Which Shall It Be, Bodies of Our Soldiers or Explosives to Batter Through Germany's Intrenchments?

THERE are two ways of battering through Germany's entrenched army and carrying our flag across the Rhine. One is through a tremendous amount of explosives sufficient to blow out everything ahead of our men. The other way is through using the bodies of millions of American soldiers against the tremendous fighting ability of the German Army.

Which will America choose?

Do we want to throw against the entrenchments of Germany millions of the flower of our nation unsustained by adequate munition power, and thus bring death to hundreds of thousands who might have been saved? Or do we want to equip these men with practically unlimited munitions that by the power of explosives they may blast their way through Germany? It is merely a question of human lives or of explosives. Which does America choose?

The answer to this will be found in how we handle the platinum situation. Platinum is absolutely essential in the production of explosives. We can increase our output of sulphuric acid and nitric acid and explosives in proportion to the available supply of platinum. Heretofore about 90 per cent. of our platinum has come from Russia. It would be unspeakable folly to depend upon Russia for another ounce of platinum. Without platinum we cannot fight except under tremendous handicap. Without platinum, and platinum in abundance, we shall vastly increase the number of deaths of our soldiers. Every ounce of platinum in this country should be commandeered and deposited in safety vaults of the Federal Government, for every ounce of platinum means, if available for use, fewer deaths on the part of our soldiers; and every ounce of platinum lost, or not available, means more deaths.

Every jeweler who uses even a fraction of an ounce of platinum for jewelry will be guilty of the blood of American soldiers.

Every woman who buys a piece of platinum jewelry will stain her soul with the blood of American soldiers.

This is not an over-statement of the case. The chemists of this country who know the situation are dazed at the apparent lack of appreciation of these facts on the part of the Government itself. The War Industries Board has not apparently grasped the real significance of the platinum situation.

The War Industries Board is permitting platinum to be used by jewelers, and yet every ounce of platinum that goes into this unnecessary work lessens our power to fight and adds with certainty to the number of soldiers that will be killed. President Wilson has wisely suggested that we must increase our army without limit until we are able to destroy Germany's power; but does President Wilson know that unless we conserve every ounce of platinum in the country it will be in vain to try to create a really great army and equip it with the fighting power which alone can give it success, except at a tremendous cost in lives?

So acute is the platinum situation, so un-

certain is the supply available for war work, that the officials of the United States Geological Survey, of the Bureau of Mines, and the leading chemists of the country familiar with the condition are literally pleading for a recognition of this acute and dangerous condition. In the meantime the jewelers are being permitted to use platinum merely because it appeals to the vanity of women. Men are being permitted to buy platinum for other purposes, and the stock in the country is not so guarded but that much of it could be made to disappear under pro-German activities. It has been openly charged by Congressman Rainey that a very large proportion of the platinum industry in America is controlled by a naturalized citizen of German birth, who, it has been stated, is closely related by marriage and by business ties with the largest platinum dealer of Germany.

Despite these facts the War Industries Board moves along without any steps yet in evidence that it appreciates the seriousness of the situation, and Mr. Connor, banker chairman of the committee on platinum, has not denied the statement made by jewelers that he had been in close touch with them and that through this means they had been able to continue the use of platinum in their jewelry business, even though lessened as to quantity.

Any permission to use a single ounce for jewelry, any failure to commandeer every ounce of platinum in every jewelry establishment and in every other business house in America, is trifling with the lives of our soldiers and is making certain the death of many of them who might otherwise be saved.

Shall we fight Germany with the bodies of millions of our soldiers or shall we fight Germany through the power of explosives?

Which shall we throw against the strong entrenchments of the mighty fighting machine which Germany has created?

The answer will depend upon the action of the War Industries Board as to how it handles the platinum situation and how quickly it acts before the small amount of platinum now available is dissipated and forever lost to the nation's cause.

One hopeful feature in this situation so fraught with danger is the legislation just enacted by Congress placing platinum among the substances subject to license under the Explosives Act. The Director of the Bureau of Mines is now given authority to issue licenses to limit the sale, possession and use of platinum. If the Director, with his characteristic vigor, will make immediate use of the broad powers conferred upon him by Congress the day may yet be saved, in spite of the dilatory policy of the War Industries Board.

A GOOD EXAMPLE.

MR. J. B. DODGE of the Fulton Manufacturing Co., Richwood, W. Va., believes that the pulpit should have a tremendous power in the great struggle of atheism to destroy Christianity, of barbarism to ruin civilization, by pressing upon public attention every phase of this world war in which we are engaged. In a letter to the MANUFACTURERS RECORD Mr. Dodge writes:

I have been a subscriber to your valuable paper only a few months, but have learned to enjoy reading the

clean-cut, unadulterated utterances which you publish in regard to the war. Since I subscribed to your paper I consider the front cover alone worth the whole price of subscription. I am enclosing my check for \$10 for four six months' subscriptions, one to each of the four pastors:

Rev. R. S. Eskridge, Richwood, W. Va.
Rev. H. H. Workman, Richwood, W. Va.
Rev. A. H. Perkins, Richwood, W. Va.
Rev. Helen Hill, Richwood, W. Va.

And trust that the reading of your paper will enthrall them to preach to the people as plain and understandingly in regard to the war as you write.

This subscription for four pastors in one town strikingly shows Mr. Dodge's great interest in giving to the ministers of his community the opportunity of seeing not merely what the MANUFACTURERS RECORD may editorially say in regard to the war, but what great leaders of thought in the nation are saying on the subject, for through the MANUFACTURERS RECORD many of the foremost men of America are from week to week voicing their views on this great issue, the issue of life or death of civilization itself.

We wish it were possible for these special articles to go into the hands of every minister and every teacher in the country and be placed in all of the cantonments and the Y. M. C. A. reading-rooms throughout the land. Take, for instance, the last issue of the MANUFACTURERS RECORD as a sample; the contributions from ministers and leaders in thought and in diplomacy make that one issue absolutely invaluable to every man of intelligence in the country who desires to be broadly informed as to the war and its meaning. Not in the interest of the MANUFACTURERS RECORD, but in the interest of the nation itself, we welcome the letter from Mr. Dodge and all others who as readers of this paper seek to extend its circulation, and especially in their effort to give to ministers the opportunity of reading what others are saying on the great world war.

There is scarcely a minister in America whose salary is at all commensurate with his work. Most of them are paid a beggarly pittance as compared with the work of the men in the shipyards or in other lines of industrial activity. There are but a few churches in this country that are dealing fairly and honestly by their pastors, for most of them are paying salaries far below the value of the work that is done. This limitation of salaries makes it impossible for ministers to subscribe for many publications other than those directly of a religious character. They cannot, therefore, keep their reading table or libraries supplied with publications of national circulation, and in that way they are greatly handicapped. It would be a gracious act, and one which would be worth many times its cost, if individual church members or the boards of trustees would make up a list of a few of the best papers of national power and influence and at the church's expense furnish them regularly to their pastors.

How few of the pastors of the smaller country churches, for instance, ever have the opportunity of reading any of the daily papers except those in their own village. And how few of them have an opportunity to read many if any of the best publications which in this world war are discussing every phase of it from an infinitely broader standpoint than most of the religious papers in the land.

Mr. Dodge has set a good example. We would like to see it followed by many others, not simply in subscriptions to the MANUFACTURERS RECORD for ministers in their community, but in subscriptions to other papers doing the same work the MANUFACTURERS RECORD is trying to do.

Since the foregoing was in type we have a letter from Messrs. Houston & Liggett, manufacturers of cedarware products, of Lewisburg, Tenn., which is directly in line with the thought we have expressed in regard to the desirability of ministers having an opportunity of reading such papers as the MANUFACTURERS RECORD. Messrs. Houston & Liggett write as follows:

Enclosed you will find check for \$5 for which please send Rev. J. Burch Tucker, Lewisburg, Tenn., a copy of the MANUFACTURERS RECORD one year, and we wish every minister could receive this paper and read it next week.

On and after August 1 subscription price will be \$6.50 per year in the United States.

HON. CHARLES E. HUGHES ON THE NEED OF NATIONALIZING OUR READING AND THINKING.

THE whole nation recognizes Hon. Charles E. Hughes as one of its ablest men, one of its great intellectual giants, the man selected by President Wilson to investigate the aeroplane situation because of his pre-eminent abilities, demonstrated in the insurance investigation in New York, to get at the bottom of anything which he tackles.

Some years ago Mr. Hughes was a member of a commission appointed for the purpose of investigating the newspaper postal rate. At that time he made a careful study of the zone system, which has now been put into effect, and his committee unanimously reported against a zone system. Mr. Hughes was recently asked by the Publishers Advisory Board if he would undertake to act as attorney to present their case against the zone system. His letter in reply is of far-reaching interest. He declined to accept a retainer to appear before the committee, as he felt that he could not do that; but he unequivocally expressed his opinion and that of the committee of which he was chairman, which spent months in studying the postal question, against the zone system. His letter is as follows:

1262 New Hampshire Ave.,
Washington, D. C., June 17.

Mr. Allen H. Richardson,
Publishers Advisory Board,
200 Fifth Ave., New York.

Dear Sir: In answer to your letter, I beg to say: I prefer not to accept a retainer to appear before legislative committees upon matters of general policy, as in such matters, if I have anything to say, I desire to speak only as a citizen.

I have no hesitation in saying that I regard the zone system of postal rates for newspapers and periodicals, coming under the definition of second-class mail matter, as ill advised. The Commission on Secondary Mail Matter (appointed in 1911), of which I was a member, considered this question and reported unanimously against the zone system. We said in that report:

"The policy of zone rates was pursued in the earlier history of our postoffice and has been given up in favor of a uniform rate in view of the largest interest of the nation as a whole. It would seem to the commission to be entirely impracticable to attempt to establish a system of zone rates for second-class matter. * * *

"Progress in the postoffice, with respect both to economy in administration and to public convenience, leads away from a variety of differential charges to uniform rates and broad classifications."

In my judgment the zone system for second-class mail matter is unjust to the publisher and unjust to the public. It not only imposes upon the publisher the additional rates upon a sectional basis, but it makes necessary the added expense for the necessary zone classifications at a time when every economy in production and distribution is most important. It introduces a complicated postal system, to the inconvenience of the publisher and public when there should be a constant effort toward greater simplicity. There is no more reason for a zone system of rates for newspapers and magazines than for letters.

Newspapers and magazines are admitted to the second-class postal rates on the well-established policy of encouraging the dissemination of intelligence, but a zone system is a barrier to this dissemination. If it is important that newspapers and magazines should be circulated, it is equally important that there should not be sectional divisions to impede their general circulation through the entire country.

We are proud at this moment of our united purpose, but if we are to continue as a people to cherish united purposes and to maintain our essential unity as a nation, we must foster the influences that promote unity. The greatest of these influences, perhaps, is the spread of intelligence diffused by newspapers and periodical literature. Abuses in connection with second-class mail matter will not be cured by a zone system of rates. That will hurt the good no less than the bad, and perhaps some of the best sort of periodical literature will be hit the hardest.

We do not wish to promote sectionalism, and "one country" means that in our correspondence and in the diffusion of necessary intelligence we should have a uniform postal rate for the entire country. The widest and freest interchange is the soundest public policy.

I hope that Congress will repeal the provision for the zone system, which is decidedly a looking-backward and walking-backward measure.

Very sincerely yours,
(Signed) CHARLES E. HUGHES.

There is certainly not a member of Congress who has ever had the opportunity of studying postal business as closely as Mr. Hughes. Not one ever made so thorough an investigation of the zone system, for none of them ever had the opportunity of doing so.

Mr. Hughes emphasizes as strongly as words can do, that a zone system is a creator of sectional divisions which should not exist; and that if we are to continue as a people to cherish united purposes and to maintain our essential unity as a nation, we must foster the influences that promote unity, and the greatest of these he regards as the intelligence diffused by newspapers and periodical literature. For that reason we should have a uniform postal rate for the entire country. In the widest and freest interchange is the soundest public policy.

Mr. Hughes expresses the hope that Congress will repeal the zone system provision. Every man and woman in the country interested in the nation's welfare and in the spread of intelligence should voice the same sentiment to Congress.

FIVE MORE STATES PREFER WOOL AND MUTTON TO DOGS.

DURING 1917 the Department of Agriculture reports that five States enacted improved legislation to protect sheep raisers from dogs, and a number of other States are likely to take similar action. Slowly but surely the lawmakers of the country are beginning to see that in order to have more mutton and wool the sheep industry must be safeguarded from the wandering, unrestricted sheep-killing dog.

In pamphlet form available for distribution

The Most Damning Revelation of Germany's Turpitude Ever Published

Turpitude — Century Dictionary Definition: Inherent Baseness or Vileness; Shameful Wickedness; Depravity.

A Confession from a Partner in a Nation's Crime

August Thyssen, a leading steel manufacturer of Germany, discloses the details of a plan for world domination, entered into in 1912, between the Kaiser and the business men of Germany.

You will do your country a great service by reading and distributing this pamphlet with its amazing revelations of Germany's determination to bring on this war in order to conquer and loot the world.

5 cents per copy

25 or more at 4 cents per copy

500 or more in bulk at 3 cents per copy

Published by
Manufacturers Record Publishing Co.
Baltimore, Maryland

THE NATION SHOULD FIX A HIGHER PRICE FOR WHEAT.

THE wheat crop of this year bids fair to be largely in excess of last year's; but it will probably be short 100,000,000 bushels of the yield of 1915. We are, therefore, not out of the woods, even if the yield is as great as now anticipated. Wheat conservation must of necessity be continued, because the nation is more completely bare of wheat and of flour than ever before. We entered the new year with the granaries and the flour mills practically swept bare of stock as compared with the usual carry-over from the preceding year. We must look forward to the necessity of a big crop next year, or else still more drastic wheat conservation will be required.

The Government should put forth the utmost effort to insure a large wheat acreage this fall. No time is to be lost in doing that. The farmers must even now make their plans for the crop to be sown this year; and every day lost in preparation for this lessens the probability of a big crop next year.

In view of the increased cost of raising wheat and of the tremendous requirement for wheat, we believe that the Government should put a minimum price of \$2.50 a bushel on wheat. Anything less than that does not, we believe, give the farmer a fair yield for his work and his land. It will be difficult for him to increase his wheat acreage even at that figure, and quantity is in this particular infinitely more important than the price.

Anything which halts or delays a big acreage for wheat endangers our own food supply and that of the Allies. A difference of 25c. or 50c. a bushel to the farmer is of trifling importance to the nation as compared with the question of wheat or no wheat. Congress has proposed a price of \$2.40 per bushel, but it is reported that President Wilson is opposed to fixing the figure as high as that. If so, we believe it is because he is not fully advised as to the cost of wheat growing and the great need of increasing our wheat production.

The enormous wages that are being paid under Government direction by shipyards and railroads and other industries are of necessity appealing heavily to all farm labor. The farmer is handicapped by this competition of high prices for labor authorized by the Government. The farmer cannot possibly compete with these prices and raise wheat at the present selling price. Unless the Government should reduce the rates of wages in shipyards and munition industries—and no one for a moment imagines that this will be done—then it becomes absolutely essential that the Government shall guarantee a sufficiently high price for foodstuffs to enable the farmer to pay a much higher rate of wages than he has ever paid.

SPREAD THE FACTS EVERYWHERE.

If your soul is stirred by the awful realities of Germany's barbarism as published from week to week in the **Manufacturers Record**, pass your copy on to others that those who are not subscribers may learn the fearful realities against which our nation is fighting. Let no single copy be wasted. Pass every copy on to someone else and urge them to send it on to others, that in every home the story as given in every issue of what this war means to every man, woman and child in this and in every other land may be fully understood. Not until then will our nation awake. You can help in this way to win the war.

THE WORK OF THE MANUFACTURERS RECORD AND THE REASON FOR INCREASING ITS SUBSCRIPTION PRICE.

THE announcement in the MANUFACTURERS RECORD last week of an advance in subscription price, beginning with August 1, to \$6.50 per year, subject possibly to other advances in the future if the cost of publication continues to advance as it has during the last two years, is in keeping with what practically all of the newspapers and magazines of the country either have done or must do. A large proportion of the leading daily newspapers of the country have found it necessary to double their subscription price, and practically every paper in the country that has been selling at one cent a copy has increased to two cents.

It would have been worse than folly, it would, indeed, have been a crime against the publishing business and all that it may represent in human advancement, to have continued as the newspapers and magazines of the country were doing on a subscription price based on the cost of production two years or more ago.

To the heart of every newspaper man a large circulation is dear. Every publisher loves to feel that his paper is reaching out among the thousands and tens of thousands, and even unto the millions. It is not simply a hope of possible profit through increased advertising which inspires this thought. The desire for large circulation comes because every honest newspaper man feels that he has a message to the world, and he seeks to carry that message to as many as possible. No man who does not feel that way deep down in his soul has any right to be in newspaper work.

Until August, 1914, the MANUFACTURERS RECORD felt that it had a message to the world about the South as the nation's greatest asset, the development of which would mean the enrichment of this country and the broadening of its national life. Since August, 1914, the fateful hour in all human history, we have felt that the one supreme message which it was our duty to carry to our readers was "Awake, awake, America! Ere it be everlastingly too late to save this country and the world's civilization from being overrun by barbarism!"

We have not lessened the work which we have for thirty-five years been doing for the broadening of national development through the utilization of the vast resources of the South. Every phase of the South's resources and potentialities has been pressed upon public attention not only because of their value to the nation in peace times, but because since 1914 we have realized that the war, which we felt certain was coming, and in which we are now engaged, could not be won except through the broadest development of the South's resources. And so we have pressed with all the urgency at our command that the nation should utilize the vast stores of mineral and timber wealth, the great resources in soil for food and for cotton production, the great water-powers available for the conservation of fuel, and all the boundless natural wealth with which nature has so liberally endowed the South.

But this has been done not from the viewpoint of benefiting the South and Southwest alone, nor, indeed, from the viewpoint merely of saving this nation, but from that broader point of view that the time would come when this nation must help to save civilization, or else it would go down in the "crash of worlds" which would mark the destruction by barbarism of the civilization of Europe, and thence would inevitably follow the downfall of American civilization.

This one supreme issue is the all-dominating

question before every man in America. No man can afford to work merely to make money, or to think in terms of money, other than he thinks in terms of utilization of that money for the salvation of the nation, for the strengthening of our boys as they give their lives, as they may have to do, upon a thousand battlefields in Europe to save us from ruin. Worse than the veriest coward and slacker who slinks away to keep from hearing the call of duty is the business man or the mechanic who seeks to use this opportunity merely for money-making without consecrating that money to the saving of the nation, and that means to the saving of his own existence and that of his own family. We are told that all that a man hath will he give for his life. Surely in this great contest all that this nation has individually and collectively must, if need be, be given for its life.

It is because the MANUFACTURERS RECORD is so deeply impressed with these facts that it would gladly decrease its subscription price instead of increasing it, if it could do so, in order to broaden its circulation. Not for one moment would we be willing to overrate the character of the work which this paper is trying to do; but as it has been in our power to bring from other writers the ablest things which are being written on the war, we feel fully justified in pressing this phase of our work upon our readers. We can do this because through its columns can be read the statements of men like Dr. Hillis and Secretary Lansing, and dozens of others whose broad contributions to the great issue at stake enable us to give to our readers a wider and more comprehensive discussion, we believe, than appears in any other paper in this country on the war question. But instead of being able to reduce our subscription price it became necessary to increase it on account of costs of paper and printing and labor that are mounting higher and higher, and now the zone plan of postage will add from 50 per cent. to 90 per cent. to the postage bill, according to the zone distance.

Beginning with August 1 the subscription price will be \$6.50 per year. All subscriptions received prior to that time will be at the present rate of \$5. We are again emphasizing this increase, as we did last week, so that no one who desires to subscribe may not have the privilege before August 1 of availing himself of the present price.

SPREADING BROADCAST THE TRUTH ABOUT GERMANY, THE COUNTRY WHICH IS SEEKING TO DESTROY AMERICA AND ALL CIVILIZATION.

MR. W. J. SHERIDAN, assistant purchasing agent of the Panama Railroad Co., writing from New York, says:

We have a letter from our General Manager, at Cristobal, on the Isthmus of Panama, in which he gives us your name as the publisher of "Damning Revelations of Germany's Turpitude—A Confession From a Partner in a Nation's Crime."

The Panama Railroad Company is an institution of the United States Government operating a chain of stores on the Isthmus of Panama for the accommodation of its working force and that of the Panama Canal and it is the intention of our Commissary to distribute gratis 2500 copies of the publication above referred to.

We will be glad to have you quote us a price on these 2500 copies.

The plan of the Panama Railroad Company to distribute 2500 copies of this pamphlet should, we believe, be followed by every Government department.

If every man and woman in America could have the opportunity of reading that pamphlet and others by different publishers as to Germany's warfare and the reasons for it, this country would suddenly leap forward into such intensive wrath against Germany and the whole German people that there would

be no need whatever for the kind of campaign which the nation now has to carry on to sell Government bonds, for then every man and woman in America would be willing to consecrate everything in their power to the winning of this war against the most fearful, barbaric, accursed power which ever sought to destroy civilization.

The MANUFACTURERS RECORD has no hesitation in commending to its readers, with all the emphasis we can give, that they can do a great service for this nation by widely distributing to their friends, their neighbors, our soldiers and even out among people with whom they may not be in personal touch, any or all of the following pamphlets issued by this company:

"THE MOST DAMNING REVELATION OF GERMANY'S TURPITUDE EVER PUBLISHED—A CONFESSION FROM A PARTNER IN A NATION'S CRIME."

"GERMANY—THE SUPER-FIEND—A NATION GONE MAD IN ITS LUST FOR POWER AND WORLD DOMINION."

"REV. NEWELL DWIGHT HILLIS' PICTURE OF GERMANY'S WAR PLANS AND HER ATROCITIES IN BELGIUM AND FRANCE."

To these pamphlets we shall add next week a much larger one entitled:

"GERMANY—THE BLACKEST CRIMINAL IN THE WORLD'S HISTORY."

This pamphlet will contain the address of Secretary of State, Hon. Robert Lansing, probably far and away the most scathing denunciation ever made in the world's history of one nation by a leading official of another nation. With his inside knowledge of Germany's diplomacy and Germany's crimes against humanity, Secretary Lansing has portrayed with a master hand and with the clearness of a great judge, the career of Germany in crime typified in that statement in which he said: "It is useless to recount the black deeds of cruelty, which would sicken a tiger." That is a living, breathing statement that the most illiterate can understand. It is in language that carries weight, for it immediately calls to mind the thought of the blood-thirsty, blood-consuming, man-eating tiger as a beast, the terror of every man and woman living in the country inhabited by them; a beast which once having tasted human blood is never satiated and never satisfied without human blood.

This pamphlet, "Germany—The Blackest Criminal in the World's History," will also contain letters from the former Ambassador to France, Hon. Myron T. Herrick, Charles M. Schwab and a number of other distinguished public men and of ministers, discussing Germany and its crimes.

Early in the war we published under the title "America's Relation to the World War—Shall This Nation Live or Perish," some editorials by the editor of the MANUFACTURERS RECORD. That pamphlet has been widely circulated. We shall be glad to continue its circulation; but pre-eminently the pamphlets which we would press upon the attention of our readers are, as we have stated, the following:

"THE MOST DAMNING REVELATION OF GERMANY'S TURPITUDE EVER PUBLISHED—A CONFESSION FROM A PARTNER IN A NATION'S CRIME."

"GERMANY—THE SUPER-FIEND—A NATION GONE MAD IN ITS LUST FOR POWER AND WORLD DOMINION."

"REV. NEWELL DWIGHT HILLIS' PICTURE OF GERMANY'S WAR PLANS AND HER ATROCITIES IN BELGIUM AND FRANCE."

"GERMANY—THE BLACKEST CRIMINAL IN THE WORLD'S HISTORY."

The price of each of the first two pamphlets is 5 cents per single copy; 25 or more up to 500 at 4 cents per copy, and 500 or more at 3 cents per copy.

The price of the Hillis' pamphlet is 5 cents per single copy or \$4 per hundred.

The price for the latest and largest one, "Germany—The Blackest Criminal in the World's History," is 15 cents per single copy with 100 or more at 10 cents per copy when shipped in bulk.

The price of "America's Relation to the World War" is 10 cents a copy, singly or in any amount.

ESSENTIAL AND NON-ESSENTIAL WORK.

WHERE shall a line be drawn as to essential and non-essential work in the great contest in which we are engaged?

Some lines of business activity should of necessity go on, though nothing should be done which hampers the power of the Government to produce the things needed for the winning of the war.

Building operations not essential for the welfare of the country should not be encouraged. Under this would come, in our judgment, the building of expensive schools where present facilities can be made to answer; the erection of church buildings unless absolutely necessary to meet the needs of the community for the preaching of the Gospel; the building of courthouses and kindred operations by counties and cities, and the building of expensive homes. We do not believe that any man has a right to build a costly dwelling at the present time, however great may be his wealth. If of necessity he must build a dwelling, it should be as inexpensive as possible to meet his actual needs until after the war has been won. There are some municipal improvements, such, for instance, as a few which are now under way in Baltimore in the tearing down of dwellings in order to widen streets or to create parks, wholly unjustified. The Government should have the right to suppress such work.

But there are other improvements in the way of the building or extension of waterworks, or sewerage systems, or of hospitals, or of moderate homes needed for working people and others of limited means which must be built from a patriotic standpoint, because they strengthen the health conditions and maintain the life of the nation in that way. Here and there extensive repairs must be made to properties in order to keep them from going to ruin; and in the aggregate there is a considerable amount of building work which should be encouraged by the Government, and which the most patriotic citizen will feel justified in having done.

The Government's call for labor and for raw materials is so tremendous that it is difficult to draw the line and say where ordinary business interests are justified in expanding their operations, and where patriotism demands that they shall meet the conditions of the hour. There are many men of extreme patriotism who feel, and we think justly, that the curtailment of necessary activities such as we have outlined should be as small as possible, consistent with the actual needs of the Government. Should the Government press its elimination of new construction work and new enterprises to the point where a large number of business men doing work essentially important to the country should be driven out of business it would lessen the nation's prosperity and make it impossible for the people of the country to finance the war without great hardship.

We do not think the Government has yet differentiated as carefully as it should do between the essential and the non-essential thing. It is, for instance, still furnishing transportation for the handling of race horses, for the handling of paraphernalia connected with racetrack gambling; for the handling of the liquor trade; for the coal and the raw materials which enter into the brewery business; and none of these are essential to the best interests of the country. So long as the business men of the nation find that the Government gives its tacit approval to the broad utilization of transportation of coal and other materials for the liquor traffic, so long will they of necessity feel that the Government has not as yet differentiated properly between the essential and the non-essential things. As it now stands, coal, an essential to the nation's life, is wasted in the manufacture of beer and in the distribution of beer. Transportation, which is far less than the needs of the country, is wasted in the handling of race horses, of whiskey, and of beer. These interests are not simply non-essential; they are a definite curse to the country; and yet while permitting them to use coal and transportation and labor and other things, the Government is denying the right of many interests to continue in operation by cutting off the supply of materials.

We must of necessity build many thousands of dwellings, we must maintain in good condition those now in existence, we must enormously expand our

manufacturing facilities, our agricultural activities, our transportation interests by rail, water and highway. All of these things must of necessity be done.

One phase of this situation is discussed in a letter to the MANUFACTURERS RECORD by a business man who feels that it would be unwise for him to discuss the subject over his own name; therefore, in a letter intended to be strictly confidential, but which we feel justified in using without his name, he writes:

It has been a source of great interest to me to follow your various remarks in reference to the war, which shows such a full patriotic spirit and also keen conception of the issues, and I also know from experience your intense interest and consideration for all Southern interests, so I write to ask you a little information, which I am sure that you can give from your wide knowledge of affairs.

There is no more patriotic man in the United States than I am. I have only one son, who was one of the first to volunteer for service, and I only have one daughter, whose husband was one of the first to volunteer for service; therefore, my children are doing all they can for their country. At home I am trying to keep the pot boiling, so that my children will have a living from the business when they return from the war, if the Good Lord spares their lives to us, but in order to successfully carry on our daily work we have to have material, and each day as we go into the future we see additional restrictions being put on commercial interests, so that the business man today finds it almost impossible to work his operation successfully.

Now, I realize that before anything else, we must consider the necessities of the Government, but the thought suggested itself that possibly certain officials who are commandeering the various commodities which the business man sells daily go to an unnecessary excess limit and therefore produce the shortage of material to the business world, which, of course, brings serious results.

How can the business man carry on his obligations if we cannot get material with which to carry on our business? Now, I doubt if there is a man in the South today who expects to handle his business on normal lines existing before the war, but he does hope to handle it to a certain percentage that will enable him to carry his charges, pay his expenses and secure a living, and, above all, to hold his organization together.

I don't want to appear to criticize, I am only asking for information. We find a large volume of material is moving to Government work; we find that same material lying unused for weeks. Of course, it is difficult to draw the line so as to play safe, but unless the Government gives us a chance to do business, it is going to be impossible for a great many men to carry out their obligations to the Government in the purchase of Government securities. Every true American today is doing to the fullest extent of his ability; in fact, I believe almost every citizen who feels deeply this great tragedy that we have to work out is going farther than he can afford, depriving himself of a great many necessities, so as to give additional support to the Government, and it seems to me, therefore, that if some careful consideration would be given the interest of the business man, so that business can go on, not as usual, but on a line of safety so that the strength of the backers of the Government, which are its citizens, would not be impaired, it would be greatly appreciated.

If the Government were to say to me that it is necessary for me to cease business in order to assist in securing victory, I would not hesitate a moment, but I attended a meeting in Washington some time ago and heard the Government official of the War Industries Board speak to his fellow-citizens, who had been invited to confer with him in reference to certain business being placed in the preferential class, and I was struck with the remarks made by that gentleman, that it was not the Government's intention to injure any man or hurt any man's business, but it was the purpose of the Government to help everybody, but the Government had to know how to do it so as not to injure the Government's activities to the winning of the war.

I think that there are a large number of luxuries and non-essentials that should not be considered during the period of the war, but the building interest, which is closely allied with all interest of the Government, seems to me should be considered. Now, I do not mean by building interest simply the building of residences or improving property, which can all be deferred until after the war, but there is a large amount of important work which is connected with the general building interest of the country which cannot be handled by the manufacturers direct to the people, but must be handled through the dealer in the various cities over the country, and it is such business that it seems to me that the Government could consider.

In other words, if manufacturers of cement, lime (agricultural, hydrate, chemical) is not all needed by the Government, then let us have some of the material, but as it stands today, it seems to be impossible to get any material unless covered by a Government priority order. Of course, we cannot get material under such conditions. If the Government wants it, the Government should have it, and we should make no complaint, but I can hardly believe that the Government wants all the output of the manufacturers of building material.

As stated above, I only write this to you in a strictly

personal way, to know if you think that the Government will be able to consider the business interest of the country, so that such an interest will be disturbed as little as possible, and to establish such a condition that it will be necessary for business to get some of the material manufactured which is necessary to the Government, but may not be necessary to be had in such volume, so the general outside interest cannot be applied. Before everything, we must see the Government's necessities. Of course, when we find that we cannot get material to successfully carry on our business, we naturally become anxious to know how we are going to work out in the future to meet our obligations to the Government, which we are so anxious, willing and want to assume.

KULTUR IS

INTELLECT WITHOUT INTEGRITY
RULE WITHOUT RIGHTEOUSNESS
CONTROL WITHOUT CONSCIENCE
JUDGMENT WITHOUT JUSTICE
FORCE WITHOUT FAIRNESS
MIGHT WITHOUT MERCY
MATERIALISM GONE MAD
SCIENTIFIC SAVAGERY.

CHRISTIAN CIVILIZATION MUST
DO IT TO DEATH.

The foregoing definition of Kultur is sent the MANUFACTURERS RECORD by Mr. J. B. Finley, secretary of the Federal Land Bank of Baltimore, and a member of the National Executive Committee of the League to Enforce Peace.

Germany The World's Blackest Criminal

Believing that Secretary Lansing's address and the other special articles printed in our issue of July 4th gave an official and comprehensive resume of the whole origin and meaning of this war, we have anticipated the demand for them by putting them in the permanent and convenient form of a 28 page booklet.

These articles and letters are by the following leading men of our country:

HON. MYRON T. HERRICK,
Former Ambassador to France.

CHARLES M. SCHWAB.

REV. ROBERT STUART MAC-
ARTHUR, D. D.,
President of the Baptist World Alliance.

HENRY A. WISE WOOD,
*Chairman, Conference Committee on
National Preparedness.*

HON. ROBERT LANSING,
Secretary of State.

Also an Editorial which attracted
wide attention throughout the
Country written by

RICHARD H. EDMONDS,
*"The Only Peace Terms We Should Ever
Consider."*

15 cents per copy; in quantities of 100 or more 10 cents
per copy, when shipped in bulk.

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MANUFACTURERS RECORD
BALTIMORE, MD.

"The Only Terms of Peace We Should Ever Consider"— Views of Others on Position of Manufacturers Record on This Issue.

A STILL DEEPER DEPTH OF INFAMY.

THE Asheville Citizen understands the Hun of Hell (for such should be the designation hereafter of all Huns) when it says:

"Let his name be anathema with mankind for all time to come; let him be an outcast among the vile and the accursed."

We mean the Hun; the brutal yet cowardly Hun, the murderer of babies and little children; the ravager of helpless women and girls; the liar, sneak and bully; the heir of the devil and the leprosy spot on the body of civilization.

As though the catalogue of Germany's crimes had not been complete, the world has been again shocked beyond expression by a savage and wanton attack on a hospital ship. The British steamer Llandovery Castle, carrying all the distinguishing marks which among enlightened and civilized nations are supposed to protect and have always protected hospital ships from enemy attack, and carrying a company of nursing sisters, was torpedoed in the most cowardly fashion, while the savages who perpetrated this crime looked on in exultation. The press dispatches state that all lights were burning when the Llandovery Castle was torpedoed. Among these was a huge electric cross "over the bridge and strings of white and green lights on either side." The red crosses on the sides of the vessel were also illuminated by electric lights. But what does the Red Cross or any other cross mean to the Hun? These and the other lights on the ill-fated steamer only aided the slaughter work of a beast gone mad. AND YET SOME THOUGHTLESS MIND HAS ACTUALLY PROPOSED TO SEND THE AMERICAN STEAMER "COMFORT" ACROSS THE ATLANTIC WITHOUT CONVOY OR ESCORT OF ANY DESCRIPTION, IN ORDER TO "TEST GERMANY'S GOOD FAITH." God save the mark! Regardless of the origin of this idea, we do not hesitate to say that such a scheme smacks of German propaganda, a trick conceived by the Hun in order to enlist American sympathy. For it can be well foreseen how, in the event that Germany's sea pirates missed the Comfort, they would follow the incident with a lie to the effect that they had permitted America's hospital ship to go through in good faith.

The sinking of the Llandovery Castle and the accompanying murder of 14 religious sisters add still another debt and another crime for which Germany must pay to the last farthing. For the crimes of that devil's spawn—the Kaiser—the German people will suffer and pay for centuries to come—as they should suffer. For by their silence and absence of protest they condone and approve the brutal outrages of the beast who rules them. For generations and generations, almost unto the end of time, civilized men and self-respecting women will turn in horror and loathing from all things German.

Proposed Punishment for Germans.

G. E. CUTTLE, Govans, Md.

Mr. Edmonds' article in the Baltimore Sun, July 4, and his articles in the MANUFACTURERS RECORD have been read by men with great interest and handed on to the next person.

Mr. Edmonds speaks in the Sun article as the just due of the militarists of Germany as being hanging and shooting. This is one of the few things in his writings that I think is wrong, or unjust, in that this is too lenient. Death is only a matter of a few moments in these forms, and only a few minutes of bravado is necessary to meet these deaths. From the Kaiser down to lowest fire-eater the proper form of punishment would, to my mind, be a pick and a shovel and a ball and chain and the time and place be for life rebuilding devastated and anguished Belgium and France. In the sweat of their brows should they atone for their mad orgy.

For the lust-crazed population of Germany, with their armaments and fleets taken away, as a desperado is stripped of his "gun" and "knucks," the indemnity should be such as would rebuild and rehabilitate these ruined and devastated countries. Germany's internal war debts and loans are to be nullified and made void as a fine imposed on the generation that has caused the mad onslaught. But the immense indemnity, a deterrent for future hordes of the offspring of the beasts, is to be collected by allied control of her customs at Bremen and Hamburg. Every bushel and bag of stuff going and coming out to be taxed and levied upon, so that even a bird-gun will be abhorrent for a hundred years to a Hun and his litter.

The present generation and to the third and fourth

generation must be made to pay, must be excoriated by the lash of the world's condemnation of their wanton destruction of the world's progress and peace.

Either this line of procedure, extreme to the last degree, or the "next war," as their leaders glibly write and plan for, will be upon us in the next 20 or 40 years, more frightfully devised by her war lords and Gott.

The Limit of Brutality.

[Wm. C. Cornwell, Editor The Bache Review, New York.]

If we needed anything to make more positive the determination to carry on the war until Germany surrendered unconditionally, the sinking of the Llandovery Castle would furnish it. The abhorrent brutality of a nation which deliberately torpedoes hospital ships without warning in the blackness of night, slaughtering surgeons and nurses, ramming the boats of survivors in endeavor to completely destroy all traces and evidence of the dastardly deed—such brutality sinks Germany and all her people to the level of outlawed brigands, to whom the other nations of the world should show no more quarter than to dangerous wild beasts.

It should make certain, once for all, that no peace will be extended except on terms of full damages and reparations and the limit of punishment.

It may be well to write down here the circumstances of this incredible horror. A German submarine 70 miles from the Irish coast, on the night of June 27 torpedoed the 11,000-ton hospital ship Llandovery Castle, which had been chartered by the Canadian Government and had been in the service of carrying wounded and sick from England to Canada for many months past. The ship was then on her way to England. She had on board 258 persons, including 80 men of the Canadian army medical corps and 14 women nurses. Only 24 of those on board have, by latest report, survived the treacherous attack which came without warning.

All lights were burning when the Llandovery Castle was torpedoed. These included a huge electric cross over the bridge and strings of white and green lights on either side. The red crosses on the side of the vessel also were illuminated by electric lights. One of the escaping boats of the hospital ship containing 12 nursing sisters was seen to capsize and the sisters were drowned. The surviving boats were shelled and the submarine tried to ram some of them. Only 24 persons out of 258 on board escaped to tell the story. The submarine evidently intended to sink all and leave no trace.

That not having been done, Berlin puts out two lying defenses—one denying the sinking altogether, the other claiming that the hospital ship was carrying American flight officers.

We have passed long ago the time when we attributed to such cold-blooded assassins as this submarine commander, the individual responsibility for their insane, murderous brutality. The qualities which they display are the qualities of the German nation. The people of Germany and their rulers are all of one stripe. Underneath the purring duplicity with which they have deceived the world for years is this cruel thirst of the mad brute for blood, lust and power.

It has developed spontaneously throughout the whole nation, by leaps and bounds, under the hot breath of vengeful warfare. But it is in the blood, and always has been there. It can never be uprooted. Subjugation—if necessary, extermination—must be the remedy. For all the woes and miseries and bloody horrors which this inhuman nation has brought upon the world, it must be made to suffer. Why should such a power be allowed to exist in any form? Germany must be wiped out as a nation and relegated back to her former principalities—Prussia, Bavaria, Saxony—separate small States—deprived of any army or any navy, given only local police to preserve order, under bondage, by mortgage of all its possessions, governmental and personal, to pay for damages, for indemnities, in retribution, and under guard of a League of Nations which shall act as keeper, as over any other body of mad brutes.

The defeat of Germany is inevitable, whatever may be the next decision on the Western front. We have an army of 2,000,000 men. It will be 4,000,000 by

January 1. One million are in France—half of these went over in the last two months. However many millions more may be required to bring Germany to her knees, they will be sent. Our vast industrial resources have turned the corner of inexhaustible war supply, of ships, of guns, of aeroplanes. The output is enormous now; it will go on increasing until the war is won.

We have been commemorating, not celebrating, the anniversary of the nation's birth. It is not a celebration. It will not be until the armies of civilization march down under the Lindens and until, in Berlin, the flags of the Allies with our own wave over a fallen city in celebration of the recovered liberty of the world.

The British Seamen's Union some time ago established an after-war boycott against Germany on account of the murder of seamen by submarine. At each offense the length of time for the boycott to continue has been increased. It has already been fixed at 68 months. Now the union demands that this be extended five years further on account of the Llandovery Castle brutality. This will shut German sailors out of the civilized shipping world for over ten years.

In the hearts of the people of the United States and the Allied countries, there is being established a firm determination never to buy or use German goods after the war, revolved between clenched teeth at every added inhuman offense. Even the milk-and-water pacifists are beginning to turn. This is building up an intangible, but what will prove an effective, wall of popular indignation which will shut Germany in after the war as a condemned and abhorred criminal.

But this great economic force should be used officially as a means of enforcing German surrender. If, as has been proposed in England, for every week that Germany continues the war all German vessels shall be shut out from every American port after the war for an added year, and this be made operative at once by act of Congress, some effect might be produced upon at least certain sections of the German machine.

Edmonds Would Show Huns Their Own Mercy.

[Tampa (Fla.) Times.]

In striking contrast to the ridiculous "peace terms" put out by the heretofore unknown "Count Roan," alleged to be a member of the Prussian House of Lords, to which mention is made in another column, are the American terms as stated by Richard H. Edmonds, editor of the MANUFACTURERS RECORD of Baltimore. To Mr. Edmonds easily belongs the enviable distinction of being the most patriotic American. His powerful editorials published in the MANUFACTURERS RECORD and copied in all the papers of the land have done as much to arouse the patriotic spirit of America as any other cause. He has torn the mask from the hellish Huns, and shown them to all the world in their horrible, inhuman and bestial depravity. There is no namby pamby sentimentalism about the German people as distinguished from the German Kaiser, in his writings. He shows that they have stood solidly behind the Kaiser in all his mad schemes of conquest, and that there can be no peace until those ideas are beaten out of them by the mailed fist. Because of his virile patriotism, which has been an inspiration and a source of joy and pride to every true American, his views on a possible peace are peculiarly valuable.

He says: "Unconditional surrender must be America's answer to any suggestion of peace from Germany, and there should be no consideration even of unconditional surrender until Germany's armies have by the power of might been driven out of every country they have overrun, and until millions of soldiers of the Allies—which means our soldiers and the soldiers of our European allies—have marched through Germany and Austria and Turkey and taken possession of Berlin and Vienna and Constantinople." Further, "these criminals, these murderers, these rapists, these looters, these manglers of women and children, these fiends of hell itself, who put to shame all that hell has ever known, must be treated as we would treat the blackest criminal that ever disgraced humanity." Who shall say he is not everlastingly right? Again: "Not until these criminals who have led in Germany's criminality are dead, shot or hanged in the presence of the assembled people of Berlin, Vienna and Constantinople, should any man representing civilization be asked to meet on any terms whatsoever, people representing these conquered countries." Again must every sense of common justice approve his words. The Kaiser and his tribe are the arch criminals of all time. If they

escape punishment, then never let us talk again of law, and right and justice. Let us cease to hang for murder, if we let the murderer of millions go scott free. Let us abolish all law, if we permit these violators of every law which mankind has passed for its protection since the world began, go free. If we do not punish these fiends it will be a tacit acknowledgment that Germany is right, and that might is henceforth to supersede right in the world.

He has no sympathy with the sentimentalism that preaches "no indemnity" from Germany. She forced us into the war, "why should we give millions of lives and billions of money to stay the rush of the murderers and looters, and not demand repayment of the cost and return of the loot?" He would have an enormous indemnity demanded of Germany, Austria and Turkey to repay Belgium, France, England and Italy and as well as money can do, to the United States also, the fearful money loss caused by these freebooters and incarnate devils. Again must we say Amen. This is no time for sentiment. We are fighting with cutthroats and robbers, who are as merciless and savage as the fiends of hell itself. They know no mercy, and should be shown none.

No Peace Till German Power for Evil Has Been Forever Crushed.

H. B. WEISHAMPEL, Baltimore, Md.

I read to my family this morning the cablegram sent by you to the London Times, and beg to commend it as an efficient expression of what could be the unanimous opinion of all the allied nations, and which, I am sure, is the mind of our noble President and a large proportion of our people.

But the cablegram is specially pertinent now, as there is still lacking in many minds a full conception of the "mind of the beast" which today threatens to destroy civilization, as evidenced in the childish folly of sending out hospital ships lighted and bedecked. This almost incredulous folly in trusting to some humanity from the militaristic crowd that is wholly sold, like Ahab of old, to do evil, was recently answered in the sinking of the Canadian hospital ship, with its precious living freight. It will be again demonstrated, if possible, if the folly is repeated in the sending of the Comfort hospital ship as proposed.

The idea as expressed in your message should so obsess the Allied nations that, when what will seem reasonable peace proposals are extended by the Central Powers, whom we simply cannot trust, and when at that time the war-weary people shall be in a state of mind to accept anything just so it will bring a cessation of hostilities, the great majority shall have strength enough to insist that no peace shall be consented to that shall not once and forever crush the power that has inaugurated the great conflict.

RAILROAD CONTRACT REPORTED SETTLED.

ACCORDING to a report from New York, the railroad contract to be made between the Government and the individual roads for the period of the war has been agreed upon by the Railroad Administration and the attorneys for the railroads, and The Sun of that city publishes the main provisions of the agreement, the full text of which it says it has obtained. The paper further says that the railroad executives will meet in New York on Friday of this week to act on the contract, and that enough of them have been sounded to show that it will be approved almost unanimously.

The main provisions of the contract are presented as follows:

1. It gives the roads the full compensation mentioned in the railroad act.
2. It restricts the amount of additions and betterments chargeable against the roads' corporate property.
3. It guarantees the payment of regular dividends during the period of Federal control.
4. It assures the payment of all fixed charges and the carrying out of all contracts entered into prior to Federal control.
5. It makes all road extensions chargeable to the United States.
6. It makes all additions and betterments for war purposes and not suitable to the normal devel-

opment of the property chargeable to the United States.

7. It provides for reasonable interest to be paid to the corporate organization for cash used by the railroads in additions, betterments and extensions and for equipment.

8. It keeps in force the accounting practices and the payments to subsidiaries in force prior to Federal control.

9. Government to respect ownership of roads in mines, oil wells, etc.

It is said that the contract has been amended in such a way as to do away with all objections to it on the part of the railroads. It is the result of more than five months of negotiation and work.

HOPE TO CURB RAVAGES OF BOLL-WEEVIL BY ARSENICAL POWDER SPRAYING.

CONTROL of the cotton boll weevil seems to be in a fair way of accomplishment in the discovery by the United States Department of Agriculture of the fact that arsenicals may be used as a powder spray in controlling this pest.

Mr. B. R. Coad of the Bureau of Entomology, while working on some biological investigations of the boll weevil, found that the weevils drink regularly from the rain or dew collected in droplets on the leaves of the cotton plants, and entomologists have proved by a series of experiments that boll weevils can be poisoned under field conditions and that the poisoning is a practical method of controlling the pests. The experiments have been conducted under many conditions and for several years, so as to give the method a complete trial before making the results known to the growers. The details are now being published in a Department Bulletin entitled "Recent Experimental Work in Poisoning Cotton Boll Weevils."

According to the scientist, either a di-hydrogen lead arsenate powder containing not less than 32 per cent. of arsenic pentoxid or a calcium arsenate containing at least 42 per cent. of arsenic pentoxid will produce an effective control if handled properly. It also is expected that it will be possible to dilute these considerably with some cheap carrier such as lime, though this has not been definitely determined. The experiments have shown that a very fine powder is taken up more readily by the dew and held in suspension for the weevils than coarsely powdered chemicals. This physical condition is especially important since the poison is applied in the form of a dust spray.

The time of applying the poison has proved most effective when applied just as the cotton obviously slackens in blooming, but further work along this line is still to be done. It seems probable that the effective interval between applications is about one week. It is well known that much more effective poisoning with dry dust can be done while the dew is on the plant, as the poison not only clings to the plant better, but has much less tendency to drift from the cotton. The most effective time for application, therefore, usually is between 4 P. M. and 9 A. M.

Several machines are on the market for dust spraying. In the early experiments a hand dust gun was used with which it was possible to cover four to five acres a day. In order to cover larger areas, however, a special power machine was developed which will cover nearly 200 acres per day. The Department now expects to develop an intermediate type which can be sold cheaply and which will cover 20 to 30 acres per day.

The amount of poison required for application so far has depended more upon the requirements of the machinery used than on the amount necessary for thoroughly dusting the cotton. In general, about five pounds per acre have been applied, but this is excessive, and with further improvement in the machinery and the use of the poison with mixtures such as lime, smaller amounts will be effective. In most of the experiments from three to five applications were made, but the effectiveness of these was considerably reduced by the fact that they were on such small plats. In the large-scale experiment the effect of a single application was as great as was

secured from about three applications on a smaller plat. This more efficient work on the large scale was due, of course, to the fact that there was practically no migration of weevils from adjoining areas.

The cost of treatment averaged about \$1 per acre for each application. This, however, may be reduced considerably when large areas are sprayed and when improved machinery requiring less poison is employed. The cost may be still further reduced when it is possible to mix the poison with other powders, such as lime, which will act as carriers. Further, it will rarely be necessary to poison an entire plantation to control the weevils, since as emerging in the spring they always concentrate in the area in which they passed the winter. For this reason a great part of the cotton is not seriously infested with weevils until some time after mid-season and then not often until well along in August.

The control measures adopted must depend upon conditions in each plantation, but by concentrating on the more heavily infested cuts just before the weevils become sufficiently abundant to migrate to the remainder of the cotton it will be possible to only directly to benefit the cotton treated, but to protect the remainder of the plantation by preventing the weevil migration. In this way the cost of the treatment for a comparatively few acres may be borne by the benefit derived by the entire plantation. If science has thus achieved the doom of the boll weevil, as the United States Department of Agriculture believes, a mighty service will have been rendered to all humanity.

RESULTS

First Year of

FOOD ADMINISTRATION

(Preliminary work began May 19, 1917. Food Control Act passed Aug. 10, 1917.)

WHEAT EXPORTS (since July 1):

Estimated surplus for export, 20,000,000 bushels.

Actual shipments to June, 120,000,000 bushels.

BEEF EXPORTS:

Ordinary rate, one to two million pounds monthly.

Largest single month this year, 87,000,000 pounds.

PORK EXPORTS:

Ordinary rate, 50,000,000 pounds monthly.

Largest month this year, 308,000,000 pounds.

PRICE OF FLOUR (Minneapolis):

One year ago, \$16.75 a barrel wholesale.

Present price, \$9.80 per barrel.

PRICE MARGIN (between farmer's wheat and flour made from it):

One year ago the difference was \$5.58.

Present date the difference is 64 cents.

IN GENERAL: To the farmer going to market 27 per cent. more than last summer; to the housewife buying in market 13 per cent. less than last summer.

And the ALLIES HAVE BEEN SUSTAINED

Bulletin recently sent out by the Northwestern Division of the United States Food Administration Milling Division.

Due Consideration to Business Men Highly Appreciated.

D. D. PEDEN, Vice-President and Treasurer Peden Iron & Steel Co., Houston, Tex.

We are just in receipt of copy of your letter of June 8 to Hon. Wm. G. McAdoo, and we want to congratulate you upon writing such a good letter and thank you most heartily for taking up the interests of the manufacturers and the business man in the way you have.

The farmer, laborer, etc., is usually patted on the back by the newspapers, the magazines, etc., but the manufacturer and business man receives some awful hard knocks, as a rule, and no one hardly ever says a good word for us. We are only too glad that you have done this, and feel sure that your letter will be of great benefit to the fraternity.

The South Should Not Be a Mendicant, Asking the Government to Guarantee Its Cotton Price

[In the fall of 1914, when the European war startled the world and practically stopped all business, the South faced a price for cotton which looked to many as though it would be disastrous. Led by unwise agitators and some politicians the South was posed before the world as a beggar, with hand outstretched, asking alms, pleading with the country to "buy a bale of cotton." The real South, the manhood of the South, was not a part of that plea of the beggar; but the politicians and the weak-kneed agitators did the South irreparable harm in causing the world to regard it as a beggar section.

We are glad to be able to publish the following from Mr. W. B. Thompson, an ex-president of the New Orleans Cotton Exchange, the president of the Board of Commissioners of the Port of New Orleans, which embraces the great State-owned cotton warehouses and grain elevators, and in general one of the leading men of that section of the South. Mr. Thompson vigorously and justly assails the proposition made by some bankers at a convention held in New Orleans to ask the National Government to become the buyer of the South's cotton crop in order to guarantee the ability of this section to sell what will probably be a fairly heavy yield.

Against this effort once more to pose the South as a beggar, the Manufacturers Record joins Mr. Thompson in vigorous protest.

The farmers of the South, fully alive to the world situation, have unduly stretched their acreage; but this section is abundantly able to market and finance its cotton if it will only have the courage and the backbone to do this properly and not be frightened by the speculators in the South, many of whom are themselves doubtless loaded with cotton and are anxious to unload it on the Government. The real manhood of the South cannot permit this section to go up to Congress as a beggar again. To do so would be a reflection upon the honor and integrity and ability of the whole South. The Manufacturers Record feels that the men who met in the so-called Cotton States Bankers' Convention at New Orleans do not represent the best interests of the South.—Editor Manufacturers Record.]

By WILLIAM B. THOMPSON, New Orleans.

The "Cotton States Bankers' Convention," which convened at New Orleans on July 5, frightened by the outlook in the cotton situation, adopted a resolution calling upon Congress to organize a Federal Cotton Corporation, which would be authorized to purchase, at a price to be fixed by the President, all cotton for which another buyer was not available. In brief, the resolution calls for a fixed minimum price for cotton. It is to be noted with satisfaction that the delegations from the States of Georgia and Louisiana voted against this timorous, ill-considered and mischievous resolution.

The futility of such a movement at this time is apparent to all cotton people whose reasoning facilities are not paralyzed by the element of fear. No minimum price figure is suggested by the resolution or in the discussion, no declaration is made as to whether the fixed price shall apply to cotton as it runs or to middling cotton with additions and deductions for the several higher and lower grades, and if the latter application is meant, no consideration is given to the problem of how and by whom the grade differences may be established or where the Government will find the several thousand classes necessary to pass upon the grades and staple of the bales of the alleged 7,000,000 surplus which proponents of the resolution fearfully anticipate that the Federal Cotton Corporation will have to buy in the near future. The resolution discloses no intelligent conception of the cotton problem, but only a state of helplessness on the part of the proponents. It is not a plan; it is merely a whimper.

No attention would be paid to this humiliating appeal but for the possibility that this distress cry of a coterie of more or less hysterical bankers might, if not contradicted, be taken by Congress and the country at large as indicative of the attitude and condition of the great cotton-producing South, and might, if not opposed, produce the very calamity it proposes to obviate, namely, a drastic decline in the price of cotton. If there is anything which would surely break the market, it is a belief that the banking facilities were unable to cope with the situation. If anyone wished to break the market below the cost of production he could have no better weapon than a confession of helplessness on the part of Southern bankers and an appeal to Uncle Sam to wrap his arms around them lest they be submerged. Fortunately, this confession and this appeal are unwarranted by the facts of the situation. On the contrary, the outlook is not serious, nor even alarming, unless the trouble-hunters and calamity-howlers shall make it so.

The pessimism of which the aforesaid resolution is the fruit was brought to the howling point by the recent estimates of the Department of Agriculture, placing the crop condition on June 25 at 85.8, reporting 38,000,000

acres planted in cotton and stating that said condition percentage on said acreage indicated a crop of approximately 15,250,000 bales. This supply, added to the surplus of some 4,000,000 bales carried over from last crop, made a total supply for the coming year approximately 19,000,000 bales. From this total the banker statisticians aforesaid deducted the consumption figures of the past year, to wit: some 12,000,000 bales, and produced an apparent surplus of 7,000,000 bales to be carried. Then they gagged.

Let us analyze the fearful figures:

In the first place, it is by no means certain that 15,250,000 bales will be made and harvested. The condition estimate of the Government was as of June 25, leaving two, if not three, of the most critical months yet to be passed, to say nothing of the vicissitudes to which the picking of the crop is subject. It is entirely possible that another short crop will be produced, and it is absolutely certain that the practically ideal condition as of June 25 cannot continue. The Government's figures mean simply that a condition of 85.8 on a 38,000,000 acreage indicates a crop of approximately 15,250,000, provided that nothing adverse happens during July, August and September to lower the condition or reduce the productive acreage. That something adverse will happen is demonstrated by the invariable routine of the cotton season. Deterioration more or less severe always occurs during the months in question. Last year the actual crop fell some 1,250,000 bales short of the yield indicated by the Government figures as late as August 25. Unless a miracle happens, therefore, we cannot expect a 15,250,000-bale crop. How much less the yield will be depends upon conditions which cannot be with certainty forecast. In normal times some deterioration is inevitable. In the present times, when the labor shortage is acute, the probability of excessive deterioration is more pronounced. We may, therefore, conclude that the chances are that the crop will be considerably under 15,250,000 bales.

But we have still to face what is considered to be the most serious factor in the excess supply situation, to wit: the very large increase in the acreage. The trade has probably attached more importance to this item of the Government's report than to the condition estimate. "The condition may, and probably will, deteriorate," say some, "but the fact remains that a tremendous acreage has been planted."

In my judgment, the abnormal increase in acreage is a bullish rather than a bearish feature. If the farmers have this year increased their acreage by approximately 7 per cent., it simply means that they have "over-cropped." Encouraged by the high prices of the past season and facilitated by ideal weather conditions dur-

ing the planting season, they have put in more cotton than they can, under the present acutely limited labor supply conditions, cultivate properly during the coming critical months. The injurious results of "overcropping" are too well known for comment. In times when the supply of labor was normal we have seen big acreages go to grass and ruin because of the farmers' inability to sufficiently work the crop at the critical time. In view of the present shortage in the labor supply and the certainty of still more acute depletion in the near future, it is simply impossible for the farmers to bring 38,000,000 acres of cotton (the second largest ever planted) to normal harvest, which on the Government figures would be 15,250,000 bales. The inevitable loss in producing acreage or in per acre production will, unless a miracle happens, cut the yield materially short of the aforesaid normal expectations.

For these reasons, we may with confidence conclude that the crop cannot be over 15,250,000 bales, and will almost certainly be considerably less. There is, therefore, in the supply outlook nothing to cause anybody to throw a fit.

But even though a miracle should be performed and the crop should turn out to be 15,250,000 bales, what then? Does it mean that the great, prosperous cotton-producing South must throw up the sponge and go whimpering to the Government for minimum price-fixing protection? It by no means follows that such pusillanimous course should be pursued. On the contrary, there is every reason why the producing, banking and business interests should and can and will take care of that situation.

Assuming that the total supply for the coming season will be a crop of approximately 15,000,000 bales and a surplus carried over amounting to approximately 4,000,000, making 19,000,000 in all. Assuming that American and Canadian consumption will be 7,500,000 bales (which were approximately the figures of the past season's consumption), and assuming that the exports will be no more than the past year, to wit: approximately 4,500,000 bales, making the total assumed consumption 12,000,000 bales. This will leave an apparent surplus of 7,000,000 bales to be cared for. Will this be difficult?

In the first place, let it be remembered that some surplus must be carried by mills and merchants in order that the works may be kept going and absolute famine prevented. A little cotton in the multitude of hands of those who must inevitably carry it over means in the aggregate a very considerable amount. We carried from the 1916-17 crop into the 1917-18 crop a surplus of approximately 4,000,000 bales, and it is a matter of vivid recollection how little such surplus affected prices. I think we can say that 4,000,000 bales is a normal carry-over. This, deducted from the aforesaid apparent 7,000,000-bale surplus, would leave an excess of only 3,000,000 bales to be provided for. How can this be done?

American and Canadian consumption will be as great the coming year as it was last, and greater if additional labor can be procured.

Europe is practically bare of cotton and would absorb a 3,000,000-bale excess at one gulp and cry for more if transportation could be secured. The 4,500,000 bales exported during the season 1917-18 were shipped when the tonnage was at the lowest ebb. The great shipbuilding plans of the United States were in no wise effective during this period, and the submarine warfare was at its maximum of destructiveness. Now the submarine losses are growing smaller and smaller, whereas the American ships that were being built are now being completed, and soon the hundreds of shipyards in the United States will be turning out ships daily. It is inevitable that the ocean tonnage will be tremendously and rapidly increased in the near future, and it is inconceivable that the ship room for a commodity so vitally necessary as cotton will not be materially augmented out of the increased tonnage supply aforesaid. There is nothing short of unforeseen and unforeseeable disaster which will prevent a material increase in exports during the coming year.

Furthermore, the cotton producer is in a better position than he has ever been before to carry without assistance a part of his crop. He is not only more independent financially, but he has learned the value of gradual marketing, and he may be depended upon to withhold from sale indefinitely a considerable proportion of his crop, provided, of course, that he is not stampeded by nervous bankers.

Finally, there never has been as much money in the banks of the South as there is at this time, and never

before have the borrowing resources of Southern institutions been greater or more flexible than they are today. Indeed, for the movement and conservation of the great staple commodity in question I can say that the banking resources were never so great or so flexible as they are now. Therefore, in the unlikely event that an excess surplus must be financed, there can be no doubt of the ability of the banks to take care of the same, provided, of course, that the bankers do not develop chilblains in anticipation of a freeze that may never come.

From the foregoing reasons I can see no cause for uneasiness in respect to cotton prices. On the contrary, if the cotton people and the bankers will only handle themselves with reasonable discretion and courage there is every reason to expect prices that will prove most remunerative to the producer. It is vitally necessary that the price of cotton shall be kept well above the cost of production. This necessity exists not only because the cotton producer must have the means with which to defray his proportion of the cost of the war, but because production must be stimulated to the end that future needs of the consuming world may be provided for. To produce this result it is perfectly legitimate for the farmer to hold his cotton and market it gradually, and it is entirely proper for the banking institutions of the South to finance the crop to the utmost limit of their ability. Furthermore, it is both legitimate and proper that representations and petition should be made to the United States shipping authorities as to the importance of increased ocean transportation facilities and the necessity for increased supplies of cotton to our friends across the sea. But it is neither legitimate nor proper nor even decent for the people who have profited by the absence of a maximum price to run bleating to the Government for a fiat minimum price before they have lifted a hand in their own behalf and before any danger even threatens except that conjured by the too ready fears of certain over-cautious money guardians.

I am opposed to governmental price fixing, both as a matter of principle and in respect to the results produced thereby. Of course, emergency conditions may arise, due to the folly or the wickedness of men, where in the intervention of the strong arm of Government is necessary, but until such situation arises no good can follow such intervention, and much harm may result therefrom. No such justifying situation exists in the cotton-producing business.

If the farmer keeps his head, markets his crop gradually and holds such part as may not be in demand; if the business interests provide larger and better warehousing facilities; if the banks employ their money and resources for financing the crop; and if the Government, after providing for food and war shipments, will utilize a larger proportion of the increased ocean tonnage for cotton exports, then the cotton South has no reason to fear disaster, and has good reasons to expect abundant prosperity. Every single one of these conditions can be performed. The danger lies in the possibility that unreasoning fear of disaster may interfere with the performance of the said conditions and thereby bring disaster. Most trouble is precipitated by those who fear trouble. If we individually and collectively sit tight, refuse to become excited, meet each situation with all the means that have been given us and face the future not in trepidation, but with confidence, all will be well in cotton and in everything else.

Elaborate Program for Meeting of Farm Forces.

Raleigh, N. C., July 3.—[Special.]—Plans are complete for the largest gathering of farmers and farmerettes (if that be the best name for the farm women) at Raleigh the last week in August. At the same time, the short course in agriculture and allied subjects will be held here; the State-wide conference of county farm demonstration agents and the secretaries of the farmers' credit unions and fair associations.

This assemblage of several of the big forces which are helping to put North Carolina over the top will tax the capacity of the State Agricultural College, and will have an important inspirational effect, it is considered certain. Farm labor-saving machinery and devices, practical drying of vegetables and fruits, proper storage of sweet potatoes, seed selection, storage of food and feeds, care and feeding of farm animals and poultry, egg preservation, dairy cattle, sheep, the discussion of the best methods of marketing—these will be some of the subjects discussed by people of national reputation.

The Cotton Crop Demands Skill by Producers in Handling a Big Yield.

By W. W. MORRISON, New Orleans, La.

The Government's forecast of 15,325,000 bales of cotton as the prospective yield for this year is warranted by the large acreage and the high condition which the crop has maintained since the beginning of the season. With linters, this amounts to a crop of about 16,825,000 bales, and with the probable carry-over it means that the coming season will start with a supply of something like 19,000,000 bales of American cotton.

The boll-weevil, early frost, drought in Texas, rain in balance of the States and difficulties of harvesting may modify this, but hardly to the extent of more than 2,000,000 bales. So it looks, after the consumptive demands established by the war have been satisfied, the producers will have to carry from 6,000,000 to 8,000,000 bales all through the coming season and over into the season beginning August 1, 1919, or sell the crop at a big loss. At least this is sufficiently apparent for it to be an act of folly not to face and prepare for it.

Agricultural products are the primary basis of the nation's wealth and economic resistance. A bounteous harvest is, therefore, to be always regarded as a constructive development. Any other view would be reactionary. This contemplates, of course, that the farmers will distribute production in accordance with the indicated demand, increasing the products most essential and decreasing the output of those that are less so. This principle, so vitally necessary in securing the best results to both the nation and the individual, has been deliberately disregarded by the cotton-producing interest this year. The large acreage shows that they have attempted at least to produce what would be a super-abundant supply, even under normal conditions, at a time when abnormal conditions were steadily reducing consumptive demand.

Every well-managed manufacturing industry keeps in such a position that, regardless of the stock on hand, they are never compelled to offer more of their products than demand normally calls for. In other words, the policy is to keep all transactions steadily based on the necessities of the buyer. Whenever a plant, either from necessity or otherwise, departs from this policy it ultimately means disaster. As applied to cotton, unless this principle is rigidly observed in marketing the coming crop it is certain to bring disastrous losses to the producers.

Based on a strict itemized accounting, at the current price of October contracts the loss on the crop indicated would actually be more than many crops have brought. This is supported by abundant and clearly-defined records, both private and official, and it would be sheer recklessness for the cotton-producing interest to blink the fact. This does not mean that the producers will be in debt that much. It means that food products grown upon the farm, and labor, representing that much cash value, would be given free to the consumer or go to swell the profits of the manufacturer. It certainly does mean that debt, and poverty, too, will come to the producers if this policy is pursued for a few years.

What about the outlook? The producers are undoubtedly able to carry this crop for an indefinite period. The financiers are saying that unless quick returns can be secured from cotton shipments the movement of the crop will put a dangerous strain on the banks. This is true. It would be misleading, however, if it was not made plain in this connection that in recent years cotton in the hands of the producer has been in no sense a menace to the financial situation. It is financing cotton after it has passed out of the hands of the producers that has made the strain dangerous. And it should be emphasized that this has been almost exclusively confined to cotton that was not required for immediate use.

The farmers are organizing, and a very determined and prolonged resistance can be expected. Many influential producers have been subjecting the cost of production to a searching and businesslike investigation. While the beneficent effect of this investigation has been neutralized to some extent by the ancient habit of giving cotton the benefit of free food and free labor,

the farmers are rapidly coming under the influence of this new analysis. Hence the cost of production, as it happens to be construed by the producer, as is reasonable, will have an important influence. Probably more than half the people of the world are in desperate need of cheap clothing, which cotton alone can supply. Should peace come, this would mean an urgent demand not only for all this large surplus, but probably more besides. Then, the decreasing submarine peril and the increasing ship tonnage make it not improbable that this desperate need might be partially relieved even before the war ends.

On the whole, it seems best not to be too confident in assuming that the big surplus, now so obvious, will mean an utter collapse in cotton values.

\$6,000,000 Expenditures at Naval Academy.

More than \$6,000,000 will be the cost of improvements now in progress or to be begun in the near future at the United States Naval Academy, Annapolis, Md., in accordance with plans heretofore announced. At Bancroft Hall, the quarters for midshipmen, considerable progress has been made upon additions costing \$2,850,000. In addition a navigation and seamanship building, which will also contain a spacious auditorium, will be erected at a cost of \$2,500,000. Besides these large expenditures, \$300,000 will be spent in additions to the marine engineering building, \$100,000 for a garage and \$320,000 for a power plant.

The auditorium will be the largest of its kind in the world, according to experts, and will be built upon the latest scientific principle to insure perfect acoustic properties. Hugh Tallant, an eminent specialist in architecture of this variety, has been chosen as consultant in the work. It is said that so far as is known, the largest auditorium in the world constructed upon scientific acoustic principles is the Hill Memorial at Ann Harbor, Mich., which has a capacity of 500,000 cubic feet of air, whereas the new auditorium at Annapolis will contain 1,500,000 cubic feet of air space. The need for such an auditorium at the Academy is great, since the present auditorium is entirely too small to seat the great number of midshipmen under training. The auditorium will be placed on the upper floor of the building of navigation and seamanship. It will be constructed in the shape of a half ellipse, which shape has been found most satisfactory. The walls behind and on the sides of the speaker's stand will be of hard, reflecting material, while the walls of the building will be of imitation Travertine stone and the proscenium curtain of steel. It will be possible to curtain off the balconies to enable use of the hall to advantage when it is not filled to capacity. Every precaution to avoid interference from noise within and outside the building will be taken. The floors will be laid with a special cork tiling, and the aisles and surrounding portions of the building will be covered with heavy carpet.

The additions to Bancroft Hall consist of wings extending at right angles to the main building on the southeast side. The east wing, which, it is expected, will be completed by September 1, will contain 20 rooms for two midshipmen each. The west wing will be completed about February 1, according to present indications, and will contain 200 rooms of the same size. The original building contains a slightly greater number of rooms than the two additions, so that when completed the capacity of the building and additions will be 2300 midshipmen.

The east wing of Bancroft Hall is now used as a seamanship and navigation building and gymnasium combined. With the great increase in the number of midshipmen, both are in need of additional space. When the new navigation and seamanship building is completed the entire wing will be used as a gymnasium and many improvements will be added to it.

The addition to Isherwood Hall, now used by the department of marine engineering and naval construction, is fast nearing completion, and it is believed that it will be in full use by October 1, when the new academy year opens. The capacity of the building will be doubled with the completion of the addition and will also make way for much additional equipment.

July 11, 1918.]

War Demands for Iron and Steel Fully Safeguarded by War Board Rules

[Special Correspondence Manufacturers Record.]

Washington, D. C., July 8.

Safeguards thrown around the distribution and use of pig-iron and of iron and steel manufactured products by the War Industries Board are such that, whatever the effect on the freedom of action by the manufacturers, there can scarcely be any question that the output by the steel industry will go first to all essential war work, with other fields of demand securing later service as the conditions may permit.

In this connection the War Industries Board celebrated the Fourth by the issuance of a lengthy statement for the information and guidance of all producers and consumers of iron and all manufacturers and consumers of iron and steel products. The object was to remove a number of misunderstandings which had apparently arisen in some quarters as to the practices to be observed in the distribution of pig-iron and of iron and steel manufactured products.

Attention was first called to the resolution adopted by the War Industries Board on June 6, by which was ratified the agreement reached between the board and the American Iron and Steel Institute, after a series of conferences. The gist of the agreement was based on the common understanding that direct and indirect war requirements called for strict conservation of the available supply of iron and steel products on the one hand and a development of new sources of supply on the other. The result was the understanding and agreement that no pig-iron or steel manufactured products should be shipped or delivered except under stated conditions, as fully set forth.

These included shipments under priority certificates issued by the priorities division of the War Industries Board as a first consideration. When these were filled, customers' orders not covered by priority certificates might be given attention, provided they were embraced within the schedule of purposes entitled to preference treatment as determined by the Priorities Board, which, in the order given, took in indirect war demands connected with ships, aircraft, munitions, military and naval supplies and operations, fuel, foodstuffs for human consumption and for animals, food and collateral industries (including all sort of farming machinery, etc., clothing, railroad supplies, and public utilities). In all these cases, however, the Priorities Board reserved the right to issue revised preference lists, which shall determine the filling of non-priority orders as newly indicated, and that detailed statements of all shipments not covered by priority certificates shall be forwarded to the Director of Steel Supply of the War Industries Board at the end of each week, ending with midnight Saturday. A further provision concerned any surplus material that might be on hand after the priorities orders and the non-priority items in the preference list had been filled, permitting the producer or manufacturer to dispose of such surplus to other customers, subject to the approval in writing first had and obtained from the Director of Steel Supply. This resolution of June 6 closed with a statement of measures to be taken for investigating the capacity of the iron-producing and steel manufacturing plants to meet the requirements of the United States and the Allied Government in their war program, and for stimulating the increase in production in order to meet the direct and indirect war requirements and the demands of industries of exceptional or national importance. To effect these ends the resolution provided for the establishment of a joint committee composed of the Director of Steel Supply and a committee appointed by the American Iron and Steel Institute to look into the questions involved.

With this preliminary as a basis, the statement given out by the War Industries Board on July 4 set forth the following practices to be observed:

1. All pig-iron and steel manufactured products are now being shipped and delivered by the producer or manufacturer in accordance with the resolution of the War Industries Board adopted June 6, 1918. (A copy of the resolution was attached to the statement, and made a part thereof).

2. Priority Orders.—It will be noted that under the resolution of June 6, 1918, all orders covered by priority certificates shall be first provided for or filled, and there-

after orders embraced within the Schedule of Purposes entitled to preferential treatment, as determined by the Priorities Board, may be filled without other special priority instructions, and without the further approval of any governmental agency.

The purpose was to permit deliveries of pig-iron and of steel manufactured products under the Schedule of Purposes not only after orders covered by priority certificates shall have been filled, but at any time to the extent that such deliveries will not interfere with the filling when and as required of orders covered by priority certificates.

The Priorities Committee is now issuing certificates of three classes, namely: Class AA, Class A and Class B. One effect of this resolution is to put all orders not covered by priority certificates, but embraced within the Schedule of Purposes entitled to preference treatment, in a fourth class, which we will designate Class C, and to give such orders priority and precedence over all other orders not covered either by priority certificates or embraced within the said Schedule of Purposes, which other orders will be designated Class D.

If reasonably satisfactory delivery can be secured on Class C orders, no application for a higher priority rating need or should be made to the Priorities Committee.

3. Class D Orders; Permit to Ship.—Orders falling within Class D may be filled from surplus stocks, if any remain, after orders covered by priority certificates or falling in Class C have been provided for or filled, subject, however, to the approval in writing of the Director of Steel Supply first had and obtained.

In order to avoid delays in the filling of small orders urgently required for essential civilian uses, the Director of Steel Supply does hereby approve in writing the filling of such orders falling in Class D on the conditions following:

(a) That the order in the aggregate shall not exceed in quantity five tons;

(b) That the manufacturer shall on or before the 10th of each month report to the Director of Steel Supply all orders filled during the preceding month under this authority, and shall certify that he believes that it was in the public interest that such orders should be filled.

Applications for permit to manufacture or ship Class D orders which cannot be shipped under the foregoing authority must be filled out and mailed in duplicate to the Director of Steel Supply on blanks which will be forwarded each manufacturer; such applications must be made by the manufacturer only, and not by the purchaser. Upon receipt of such application it will have prompt and careful consideration at the hands of the Director of Steel Supply, who will endorse on the bottom of the application, in a space provided therefor, the word "Granted" or the word "Declined," and return one copy to the applicant. If granted, the manufacturer may ship on such terms and under such conditions as may be imposed by the Director of Steel Supply.

4. Allocations.—The direct war requirements of iron and of steel products of all departments and agencies of the United States Government and of its Allies will be allocated to the various manufacturers by the Director of Steel Supply.

All other orders for direct and indirect war requirements for iron and iron and steel products should be placed by the consumer with his regular source of supply. In the event a consumer is unable to find a producer or manufacturer who will accept this order, application for allotment should be made to the Director of Steel Supply only when supported by strong evidence in writing that the public interest requires that such order shall be placed and filled.

5. Jobbers' Stocks.—It is in the public interest that jobbers dealing in plates, sheets, bars and shapes, structural shapes, tubular products, wire and wire products, tin plate, heavy hardware, farm implements, mining tools, machinery and equipment, oil-well supplies, and similar products, should be permitted to maintain reasonable stocks from which Government agencies, war industries and the civilian population may draw to meet essential requirements. The jobbers recognize the necessity for rigidly restricting all iron, steel and tin products to essential use, and have pledged their wholehearted co-operation to a program to prevent hoarding on the part either of the jobbers or of their customers, and to reduce to an absolute minimum both jobbing and retail stocks. On the faith of this pledge on the part of the jobbers a plan has been adopted as follows:

(a) Each jobber shall not later than the fifth of each month file with the Director of Steel Supply, on forms to be furnished by him, a certified statement covering shipments made by the jobber during the preceding month.

(b) To the extent that such shipments fall within priority Class AA, Class A, Class B or Class C, as hereinbefore defined, or by permits issued by the Director of Steel Supply, the jobber shall be entitled to place with the manufacturer or manufacturers constituting his regular source or sources of supply, orders for the replacement of shipments so made; provided the total tonnage or quantity of each commodity ordered for replacement shall not be in excess of the amount of such commodity

shipped by him during the previous month, and embraced within the priority classes mentioned.

(c) The manufacturer will, upon receipt of such order, scrutinize it carefully in the light of the other demands to the supply generally, and the particular requirements and demands for the products ordered in the territory served by the jobber placing the order, to guard against hoarding or an inequitable distribution of the supply available to meet all demands for essential uses. The Government is depending upon the experience and patriotism of the manufacturers to assist it in securing an equitable distribution of all products and their restriction to essential uses.

(d) All order for stocks placed in accordance with the foregoing rules shall be and are hereby rated as Class B-4, and entitled to priority and precedence accordingly; conditioned, however, upon the jobber placing the order having first filed with the Priorities Committee, and also with the Director of Steel Supply, a pledge in writing, as follows:

"I do hereby pledge myself not to use, or, so far as lies within my power, permit the use of any stocks now or which may hereafter come into my possession or control, save (1) for essential uses, as that term may be defined, from time to time, by the Priorities Division of the War Industries Board, or (2) under permits in writing signed by the Director of Steel Supply; that I will make no sale or delivery from such stocks to any customer or retailer before his filing with me a similar pledge in writing; and that I will use my utmost endeavor to prevent the hoarding of stocks and to insure that they be distributed solely for essential uses."

Where such pledge has been once filed in accordance with the above paragraph, the jobber should so certify to the manufacturer when placing his order, and the order shall not be accepted by the manufacturer in the absence of such certification.

6. Exports.—No application for license to export iron or iron and steel products (save on direct orders of the United States and its Allies) should be made of the War Trade Board unless the orders fall within priority Class AA, Class B or Class C, as hereinbefore defined, or are covered by a permit by the Director of Steel Supply.

All communications with respect to priority matters dealt with herein should be addressed to the Priorities Committee. All communications with respect to all other matters dealt with herein should be addressed to the Director of Steel Supply.

EDWIN B. PARKER,
Priorities Commissioner.
J. LEONARD REPLOGLE,
Director of Steel Supply.

Approved:
B. M. BARUCH,
Chairman War Industries Board.

North Carolina Development Notes.

Raleigh, N. C., July 3.—[Special.]—The Heiner Specialty & Manufacturing Co. has removed from Staunton, Va., to Raleigh. The firm is composed of C. N. Heiner of Virginia, Phil H. Sasser and W. T. Clay of Raleigh. The last named is a graduate of the State Agricultural and Mechanical College at Raleigh, and has for several years been a member of its faculty. Mr. Sasser has for years been in the construction department of the Seaboard Air Line. The work of manufacturing all kinds of agricultural machinery and implements, including plows, is in full swing. There is general foundry and machine shop work. One of the leading specialties is the Heiner automatic window shade.

Considerable black walnut has been found in this State for use by the United States in the manufacture of propeller blades. A High Point factory has set apart a large section of its plant and is turning out propellers in quantity.

The contracts for the water intake pipe, both wood and iron, pumps and other material for the city of Raleigh's water plant is let to Tucker & Layton of Charlotte, who supplied most of the present equipment. The city will largely extend its water mains, particularly into new suburbs.

In Craven and Jones counties there are extremely large deposits of shell marl lying mainly along the deep but generally narrow Trent River, and near the railways also, fortunately. The State agricultural department owns and operates one plant on the Trent, and a Richmond firm another quite near. Now the Atlantic Marl & Fertilizer Co. is chartered by the State to dig and grind marl, with headquarters at Newbern, the capital stock authorized being \$500,000 and the stockholders R. S. Freeman of Richmond, Va.; Walter West and J. C. Brown of Newbern. Some of the North Carolina marl beds are miles in length, and they are found in the counties of Onslow, Jones, Craven, Carteret, Martin, Pitt, Greene, Washington, Beaufort, Hyde, Pamlico, Bertie, Chowan, Pender and Pasquotank, while phosphate rock is found in New Hanover, Pender and Onslow and Brunswick. On hundreds of farms there are marl deposits of all areas. There is at present no phosphate mining in the State.

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of Soviets, or councils, in Russia—the Councils of Workmen's and Soldiers' Delegates and the Councils of Peasants' Delegates. While the Councils of Workmen's and Soldiers' Delegates were at the beginning quite representative and covered to a great degree the proletariat and the garrisons in the cities, the Councils of Peasants' Delegates were never able to reach the great masses of the Russian peasantry, which, amounting to about 140,000,000, naturally could not be organized in such a short time. The Councils of Peasants' Delegates, therefore, even before the Bolshevik revolt, represented only certain groups of Russian peasantry and never represented the peasantry as a whole.

"After the Bolshevik revolt in November, 1917, a process of disintegration began in the Soviets. A considerable part of the workingmen in the cities were opposed to the Bolshevik adventure from the very beginning, and it may be said now that the majority of the Russian proletariat is opposed to the Bolshevik and Soviet rule. In many cities new elections to the Soviets gave majorities to the Social Democrats, Mensheviks, and Socialist-Revolutionists, but the new anti-Bolshevik Soviets were dispersed by the bayonets of the Red Guard, a body in pay of the Bolsheviks.

"The Bolshevik terror has therefore brought about a situation whereby a great majority of the city proletariat is deprived of the right to express its political opinions and to participate in the Soviets. This part, the greater part of the Russian proletariat, is engaged now in a mighty movement against the Bolsheviks and the Soviets in which the Bolshevik rule. According to the last reports, the proletariat in Petrograd, Moscow and many provincial cities is planning now a general strike demanding the convocation of the Constituent Assembly and the establishment of a national democratic government. Hence it may be understood that the city Soviets, or, as they are usually called, the Councils of Workmen's and Soldiers' Delegates, do not represent the city proletariat, since many political factions of the city proletariat are deprived of the right to participate in the Soviets, and since the majority of the city proletariat is opposed to the very principle of Soviet government, or class government, and stands for a national democratic government. The Soviets do not represent the army, because there is no longer any army in Russia, and the soldiers in great numbers have already left the cities. Their place is taken by the Red Guard, which, as I have said before, is a body in the pay of the Bolsheviks."

Never Represented Peasants.

"To what extent can the Soviets be considered representative of the peasant population?" Mr. Kononov was asked.

"The so-called Soviets of Peasants' Delegates," he replied, "did not represent the vast peasantry of Russia, even in their best time before the November revolt. After the Bolshevik revolt the All-Russian Council of Peasants' Delegates and the Party of the Russian Peasantry, the Party of Socialist Revolutionists, started an open fight with the Bolsheviks, which brought about repressions from the Red Guard. Finally, the Bolsheviks organized a Council of Peasants' Delegates of their own, which has no relation to the former All-Russian Council of Peasants' Delegates and which does not represent at all the 140,000,000 of the Russian peasantry.

"If you recognize the Russian people and its right to live and to fight for liberty and democracy, you cannot recognize the so-called Soviets, which have no relation whatever to the Russian people and are, in their idea, class organizations and in their practical expressions artificial organizations dominated by a single faction which did its utmost in disorganizing the new democracy and betraying it to German militarism. Take the so-called Brest-Litovsk peace. You know that the Constitutional Democratic Party, the party of Social Revolutionists, the Social Democrats, the Mensheviks, in other words, all the political parties with the exception of the Bolsheviks, have protested against the Brest-Litovsk treaty. You know that the Russian Church, expressing the feelings of the great millions of the Russian people, joined its voice to this protest. This was the real voice of the Russian people regarding the Brest-Litovsk treaty. At the same time, the Congress of the Soviets in Moscow, dominated by Lenin and Trotsky, who obeyed any order sent to them by Germany, ratified this treaty. Now, whom should you recognize, the Russian people, which protested against the 'shameful peace,' or the Soviets,

which accepted it, and in so doing have betrayed the young democracy?"

The Situation Now.

Summarizing the present situation in Russia, Mr. Kononov said:

"The Soviets were born in the flame of the March revolution, and even in their best time did not represent the great masses of the Russian people. The provincial government, undertaking as its fundamental task the organization of the young democracy, reorganized the Municipalities and Zemstvos by introducing universal, direct and equal and secret suffrage, thereby bringing the representation of the entire population into the local government. This system of democratic local government had to be crowned by an All-Russian Constituent Assembly, through which the entire population of Russia had to define the Government structure of the new democracy and establish a stable democratic government.

"The Bolshevik revolt in November, 1917, destroyed the entire plan. Instead of enlarging the basis of political representation of the masses of the people, the Bolsheviks, by establishing the rule of the Soviets and by expelling from the Soviets almost all the factions opposed to Bolshevism, established a new kind of tyranny, the worst kind of tyranny in the history of Russia. The Soviets have been in power for more than eight months and have launched not one constructive plan of reorganization in that time. They are utterly incapable of pulling Russia out of her present abyss, for the reason that they will co-operate with no one but themselves or the reactionary elements of old Czarism who are profiting from disorder and demoralization. The Soviets bar the Bourgeoisie from their councils because the Bourgeoisie is anti-Bolshevik. Likewise they bar the educated classes or the intelligentsia, because the intelligentsia as a whole is also anti-Bolshevik. Consequently, the make-up of the Soviets is confined to an ignorant mass on the one hand and demagogic and fanatic elements on the other. Under such conditions Russia will never recover."

Intervention the Only Hope.

Allied assistance, according to Mr. Kononov, is the only logical solution of the Russian situation. He said it was his opinion that this aid should consist of combined "economic and military help."

"Without military help," said Mr. Kononov, "it would be difficult to accomplish any beneficial service for Russia. In the first place, military help would be necessary to insure a basis of order upon which an allied commission could co-operate with the Russian people, and to guarantee that the supplies which the Allies would send into Russia would fall into the proper hands. In the second place, military help would offer a rallying center around which hundreds of thousands of patriotic Russian volunteers could reorganize themselves into an effective fighting force for the restoration of the eastern front. From the very start this force of Russian soldiers once organized and equipped by the military portion of the allied commission could certainly be used to prevent the exportation of raw materials and supplies to Germany, which in itself would constitute an effective blow at the enemy.

"The Russian situation is critical. In fact, it is my opinion that the Allies should have undertaken an active policy of helping Russia, of saving Russia from German domination, a half a year ago, immediately after the Bolsheviks signed the Brest-Litovsk treaty, the treaty which betrayed Russia. Our people are calling to the Allies for help, and the enemy is moving daily deeper and deeper into the heart of the country. The moment is not far distant when our people, calling for help, believing in the Allies, may meet such disappointment and such disheartenment and the German domination may establish such a grip over Russia and over the people's psychology that even should allied help finally come, it may come too late."

What Russia Has Done.

Mr. Kononov cited the sacrifices made by the Russian people to the cause of the Allies before the revolution. Up to August, 1917, he said, the casualties amounted to a total of 8,000,000 men, of whom 5,500,000 men were actually killed or wounded.

"The first Russian invasion in East Prussia," he said, "at the very beginning of the war, helped to save Paris, because the German General Staff had to transfer to the eastern front six army corps on the eve of the great battle of the Marne. Our second invasion of East Prussia helped the allied cause during the critical

days at Calais, where the then thin English lines were attacked by the Prussian Guards. The Russian campaign in 1915 and in 1916, the offensive movement in Galicia, which resulted in the summer of 1916, during Brusilov's drive, in the taking of half a million prisoners and about 500 guns—all this had its great effect on the situation of the western front, giving the French, British and Italians opportunity for preparing their attacks and giving the United States time for analyzing the European conflict and entering it finally as a battle of their own. We sacrificed much for the allied cause; hence we feel that we are entitled to allied help.

"Russia needs general and military help. We need general help in the form of rolling stock and engineers to re-establish our means of transportation, and in food-stuffs, clothes, shoes, etc., for the starving population. We need also special military help in the form of an allied force, the staff of which could undertake immediately the task of organizing regiments, divisions, and finally armies of Russian patriots, veterans of this war, who are ready to fight for their country and for freedom. Let Russia feel that she is not alone, that friends are coming without any selfish purpose, with the desire to make her again powerful, free and happy. A powerful Russia, a happy Russia, a free Russia will be a blessing to the entire world, and her resurrection will mean a speedy defeat of German militarism and a triumph for democracy the world over."

Limitations on Brick Output for War Period.

Washington, D. C., July 8—[Special.]—Arrangements for the restricted use of their products to strictly essential uses during the period of the war have been entered into on a basis of voluntary agreement by the brick manufacturers of the country with the War Industries Board.

This understanding was recently reached, according to an official statement, when representatives of approximately 15 of the 18 zones into which the 7000 manufacturers of fire-brick, paving brick and common brick have been divided met with the Priorities Commissioner and other representatives of the War Industries Board and outlined industrial conditions and agreements.

The conclusions reached and the action consequent thereon had to do with the availability of fuel for manufacturing purposes in the various parts of the country, the output of material for recent periods as compared with the earlier rate of manufacture, and the necessities for curtailment of uses in channels where not vitally essential to the war program or the civilian welfare. These, as officially set forth by the War Industries Board, were as follows:

(1.) That, with the exception of the zones in the district north of the Potomac River and east of the Allegheny Mountains, including New England, and the zone which includes the Birmingham district, the shortages in coal and disturbances in deliveries have not been sufficiently serious, generally speaking, to disturb manufacturing.

(2.) In the greater number of the zones the manufactured output was materially less in 1917 than in 1916, and materially less during the first six months of 1918 than during the first six months of 1916. This result was attributed in part to diminishing demand for general peace-time uses and in part to labor shortage, which in many zones have been quite noticeable.

(3.) The necessity of curtailing all uses which could be deferred without interference with the war program or are vitally essential for the civilian welfare was unanimously recognized as being unavoidable. The manufacturers present pledged themselves to exercise such oversight of the uses to which their products were to be put as to guard against their being used in any defensible case.

(4.) The Priorities Commissioner undertook to give applications of individual brick manufacturers for places on the preference list favorable consideration upon condition that such individuals and the industry would devote their output to vital war needs, direct and indirect, and to indispensable and non-deferable uses.

On and after August 1 subscription price will be \$6.50 per year in the United States.

Coal Consumption Restrictions Government Proposes to Enforce

[Special Correspondence to Manufacturers Record.]

Washington, D. C., July 8.

With the frank admission from the U. S. Fuel Administration that the country cannot hope to obtain the required coal supplies through increased production, the conservation measures which will shortly be undertaken to meet the fuel needs of the nation will be far-reaching in their effect upon industry.

There is no branch of the Government which has been willing thus far to assume responsibility for making a list of the non-essential industries that will suffer for lack of coal, but with the conservation section of the Fuel Administration working in close co-operation with the conservation and economy section of the War Industries Board an arrangement is being reached which limits production in many factories through the curtailment of both coal and raw materials.

Sixty million tons of coal is the total which the Fuel Administration has set out to save, and there is every reason to believe that this amount will be conserved, for Fuel Administrator Harry A. Garfield will not hesitate to take such action as he may deem necessary, no matter how drastic. This has already been proven by his famous heatless order of last January.

War industries and the domestic consumers are the users of coal that will be protected. All others will feel the pinch of necessity when the coal supplies run low.

As an initial step in the new program for saving fuel a corps of administrative engineers will begin the elimination of waste in power plants. This one item alone is hoped to gain 10,000,000 tons of coal. There are 250,000 of these plants throughout the country, and it is claimed by the Fuel Administration that from 10 to 20 per cent. of the coal now used can be saved by correct operation of the steam power, using their present equipment without any delay or expense through the installation of new apparatus.

The system will extend into all the States east of the Mississippi River and all of Louisiana, Missouri and Minnesota. In its fundamentals it includes the personal inspection of every power plant, the classification and rating of each one, based upon the thoroughness with which the owner conforms to recommendations, and the responsibility of rating to be based upon reports of inspectors, who will not express opinions, but will collect definite information.

State Fuel Administrators will be empowered to entirely or partially shut off the consumption of coal by any needlessly wasteful plant in the country.

Gas and electric-lighting plants, it is understood, will be the next to feel the force of the Fuel Administration regulations. The "lightless night" order which was suspended upon the passage of the daylight saving law will be superseded by a new order applicable to the congested industrial district of New England, New York, Pennsylvania, Delaware, New Jersey, Maryland and the District of Columbia, and possibly to the entire country.

With this regulation in force the public lighting of streets will be reduced to the lowest margin of safety. Cluster lights will be prohibited, and unnecessary daylight use of electricity shut off entirely. Advertising displays, lights in show windows, theater signs and all outdoor lights will be restricted in the number of hours they may burn.

A plan has even been under discussion limiting the amount of gas and electricity consumed in private homes, but no decision on this item has been reached.

In only three weeks of the coal year has the production exceeded the 12,000,000-ton mark deemed essential for the fuel needs of the nation, the last report of the Geological Survey showing that in the week ended June 22, while the output of bituminous coal attained the goal set by the Fuel Administration as the minimum of safety, a decrease of 610,000 net tons, or 5 per cent. was recorded as compared with the preceding week. For this loss the shortage of coal cars was blamed in the majority of the fields from which reports were received, although some labor difficulties were recorded in Illinois and the Western States.

This situation, it will be apparent, demands an immediate remedy if the coal reserves are to be built up,

and working through the War Industries Board the Fuel Administration will make some gains in coal consumption by proposed curtailment of industries. At the same time iron, steel, rubber and other raw materials, transportation and labor will be saved. Shellac and varnish manufacturers have recently been in conference with the War Industries Board regarding a cut in their business, while paints, shoes, clothing and other commodities will be dealt with shortly.

Stove and furnace manufacturers have been advised of the preliminary plan for their business during the war, involving a reduction of 75 per cent. of the styles and sizes of furnaces now on the market. The elimination of the unnecessary use of steel and iron was particularly sought in these industries, and it has been provided that no new patterns are to be manufactured during the war, lines being limited to not more than five sizes of each style of heater. The styles will be limited to three, and it is provided that either cast or steel radiators may be used for each style if desired. Each so-called "pipeless" type will be included as one of the three styles.

The War Industries Board has also directed the manufacturers to discontinue the making of firepot size of a rating less than 19 inches, and to furnish poker, scrapers, shovels, draft regulators and chains only as extras.

Manufacturers of trace chains have been sent questionnaires, which will be used in determining the future operations of that branch of industry.

A program for the standardization of pneumatic tires has recently been announced. This provides for 9 types of tires which will be continued as Class A. Class B lists 9 types and sizes which will be discontinued not later than November 1, 1920. Class C with 4 types and sizes will be discontinued not later than November 1, 1919, and the 11 types and sizes in Class D will not be manufactured after November 1, 1918. All other types and sizes are under the heading Class E and will be discontinued at once.

All of these plans, it is stated, will husband the country's resources, and is especially necessary in the case of materials brought in by ships, the fuel, and the steel and iron. Earlier regulations of the Fuel Administration cut down the output of the glass manufacturers, the clay products and building materials plants as the first step, and the indications at present point to an even wider range of curtailment plans.

If these restrictions upon industry are to be prevented, the remedy lies in an increased production of coal. The Fuel Administration continues to urge miners to give their best efforts to this end, and Railroad Administration officials maintain that they are supplying cars to the best of their ability. There is never for a moment any thought in the mind of any true American that the war industries shall be held back in even the slightest degree, and if conservation is the only thing which will provide the fuel for the war needs, every manufacturer and every domestic consumer will be willing to contribute his share toward the common reserve of fuel, provided he believes that the governmental agencies have exerted every means to obtain the capacity output at the mines.

Naval Stores Industry Not to Bear Unequal Hardships.

New Orleans, La., July 3.—[Special.]—Turpentine operators will not be called upon to make undue sacrifices, and efforts will be made to correct present labor inequalities. Cliff Williams, district supervisor of labor, told some thirty naval stores operators from Florida, Georgia, Alabama, Mississippi and Louisiana in meeting here recently.

Naval stores, which a few weeks ago were selling below the cost of production, are today way up and still soaring. For instance, turpentine was 30 cents; now it is around 60.

The crop is short. Receipts of turpentine in Savannah, Jacksonville and Pensacola from April 1 to June 20 of this year were only 33,466 barrels, a 55 per cent.

decrease from the year before. Rosin receipts for the same period 109,487 casks, a 45 and a 48 per cent. decrease, respectively.

Lack of labor caused the drop in production. One hundred thousand men are ordinarily employed in the naval stores industries, but now the ranks have dwindled to a scant 40,000, and in them are many old men, women and cripples. Draft and industrial demands are expected to make still further inroads, and it is only by the closest co-operation with the Government that operators say they will be able to meet the war needs in turpentine and rosin.

Mr. Williams' assurance that indiscriminate recruiting of labor will be stopped and that the naval stores industries will not be called on to make greater sacrifices than any other essential industry was heard with satisfaction.

Florida Stock-Raising Activities as Suggestion to Other Southern States.

As illustrating the wide opportunities Florida offers as a stock-raising country and recalling the need for the entire South to join in more extensive stock raising in order to add to the meat supply of the nation, the activities of the Sarasota Cattle Co., as outlined below, will be found of more than passing interest. In a letter to the MANUFACTURERS RECORD, J. H. Lott, president of the company, writes:

"The Sarasota Cattle Co. has purchased a block of 40,000 acres of rich agricultural land lying immediately east of Sarasota. The objects of the company are breeding and feeding of cattle, hogs and sheep.

"These lands are rich in native grasses and are stocked with thousands of head of cattle, hogs and goats. We propose to fence this land and to stock it. We propose to eliminate the cattle tick upon our range and to get into blooded stock of all kinds as rapidly as possible.

"We are arranging to plant 1000 acres in corn, for feed, next February. This crop would come off in June, and we expect to plant the same land in rice in July, which crop will mature in time to be followed with winter rye and oats. Our plan is a progressive one. We expect to increase our cultivated acreage in such crops as corn, rice, velvet beans, etc.

"We have in our holdings a block of 10,000 acres of bottom land that is very rich, and with a little drainage can all be put into these crops.

"Primarily our object is a livestock proposition, but some of our stockholders are enthusiastic over the possibilities of sugar in this section, and it may be that some time in the future we will be in position to take up this feature.

"Our company is capitalized at \$1,000,000, one-half of the stock having been issued to purchase the land. The other half is to be sold for developing purposes and working capital."

To Drain 50,000 Acres.

Fifty thousand acres of land in Washington county, Mississippi, will be drained by a \$250,000 drainage system for which contract was awarded last week to the Canal Construction Co. of New Orleans and the J. L. Arpin Dredging Co. of Houston. Plans have been furnished by the Morgan Engineering Co. of Memphis, and 2,100,000 cubic yards will be excavated for the canal. The Murphy Bayou Drainage District is the title of this Washington county improvement enterprise, and it forms a broad, shallow basin along Murphy Bayou, the future crops of this land having the Yazoo & Mississippi Valley Railway and a branch of the Southern Railway available for transportation facilities.

Powdered Lignite Suggested for Fuel in Texas

Rockdale, Tex., July 5.—[Special.]—Converting lignite coal into a fine powder and feeding the particles under boilers in much the same manner that crude oil is now handled for fuel may be put to practical and extensive use in Texas, according to plans of large industrial interests that have been conducting extensive experiments along this line for the past several months. It is stated that the process of pulverizing lignite and spraying the powder under boilers can be successfully and economically done. It is reported that the Texas Power & Light Co. of Dallas has under consideration the construction of one or more large electric power plants at the lignite beds of this section of the State for the purpose of utilizing the new method of using that fuel in the generating of electric current.

July 11, 1918.]

Reclamation of Swamp Lands in Virginia-Carolina Adding to Nation's Food Supply.

By F. W. McKINNEY of the Guaranty Title & Trust Corporation, Norfolk, Va.

To the reader who is unacquainted with Eastern North Carolina and the "black lands" of Virginia-Carolina, where the so-called "stuck corn" fields are rapidly growing in size and number, the "annual burn" about May 1 is as much a mystery as the Western blizzards would be to a tidewater native, and both are fearful to get mixed up in when they are under "full swing."

The "burn" is a part only of the process of redeeming and reclaiming the wonderfully rich swamp territory which comprises vast areas in the South, especially in Eastern North Carolina, and to the stranger and newcomer it will no doubt be interesting to have explained how these swamps are reclaimed and made to contribute to the nation's food supply.

When the fertility of these immense swamps was discovered is difficult to learn. They are, in fact, extensive pockets or basins lying between higher ridges or levels, some adjacent to streams, others setting back into the level tidewater districts many miles from the shore of the ocean or sounds. Their fertility is marvelous, formed, as they are, by vegetation deposited year after year for countless ages.

However, in recent times, extending back seven or more years, practical, business-like steps have been taken to redeem some parts of these areas by tapping the swamps by means of proper and adequate drainage canal systems. That is to say, a start would be made at tidewater, where in the initial steps a floating dredge would be constructed, and, when ready for operation, with trailer or scow following for accommodation of labor, supplies and material, would commence to dig and take one of the first steps preparatory to the "burn."

This system implies that there must first be provided an outlet to tidewater for the vast water-logged and soaked basins or pockets and as the floating dredge carves its way up small streams or inlets and across an obstructing ridge into the body of black humus deposits, which may be, as in the instance under observation, from one mile to five miles from tide. The engineers have there, previously platted or in laying out the so-called districts, provided numerous divisions. When these plats are "laid out" the same dredges are used to dig canals, 20 feet wide and 14 feet deep, every half mile over the entire area to be drained. While these main canals which lead into the outlet canal are being constructed the water is held back by dams in order to accommodate the floating dredge. When the district is finished the dredge must retrace its steps to tidewater or be taken apart for removal, for the water must be released and thus provide the next important step in draining the areas.

The elevations of these swamps above tidewater are from 3 to 40 feet, hence the moment the dams or obstructions are removed the excess water for all time will speedily find its way to the ocean by gravity out through the laterals—outlet canals to connecting streams or inlet.

The next steps leading up to the "burn" and redemption of the land follow quick and fast as compared with the slow movement of the floating dredges. With the finished and numerous canals open and the water levels reduced from 1 to 3 feet over the swamp areas to 8 to 14 feet below the average surface, hand labor is set quickly to work digging lateral ditches about 300 to 600 feet apart at right angles to these main canals. These ditches should, beginning at the canal, be seven or more feet deep and gradually lessening in depth so as to give an easy flow from the half-mile center of the land.

With these lateral drains or ditches completed, the next step is to add more labor and commence to cut and grub this thickly matted timber jungle. Large and small timber is then mowed down until frequently large areas are covered many feet deep with the slashings of these impenetrable swamps.

In the clearing developments some are large and compact, others scattered areas. It is advisable to begin cutting in the spring and summer of the year previous to the burn in the May following, thus giving ample time for the dead and drying forest growth to become practically as dry as powder. As a result the "burn" may be most complete, reducing even a portion of the logs, some 12 to 24 inches in diameter, into ashes.

Operations of this character in Beaufort and Wash-

ington counties comprise areas amounting to 7500 to 10,000 acres in an area of 10 miles square, which will be fired as nearly as possible the same moment, and before this hour of firing "no smoking" signs are seen all about. From the moment the torch is applied by anyone, those within the district, out of self-protection, must apply theirs, for even with favorable winds the sparks and burning brands are carried miles distant.

Premature "burns" are to be avoided if possible, for the expense of clearing them becomes almost prohibitive. Great precaution is everywhere necessary. All buildings within reach of the falling firebrands have to be guarded night and day, and for many miles about in the direction which the wind happens to carry the fire and smoke the entire areas are enveloped in heavy clouds of smoke, cinders and ashes which at times create many inconveniences. Moreover, some lose their temporary buildings and livestock, and woe be to the bear or other animals which may venture back into their trails.

The last year's or former clearings and the adjoining wet, undrained swamps act as a barrier to further damage, yet the fearful force of the flames and heat frequently extend several hundred yards into the wet jungle.

The result of the "annual burn" has a most promising and good purpose when it is well done. It is one of the important and absolutely necessary parts in the process of the redemption of these wonderfully fertile and yet useless areas until drained and "burned." After this the next step is the cropping of the entire area under the "stuck corn" system.

In the ditching, draining and burning process there is no mystery, nor yet anything unusual in the procedure, for the ultimate creation of rich, black-land farms. But where else in this or any other country has there been figured out or discovered that after the burn and for three successive years heavy yields of corn are produced on this redeemed drained swampland, without plowing or cultivation? Yet this is a fact, and forms the basis for so successfully and economically bringing these waste areas under subjection and use, and at a handsome profit or percentage on the original cost and additional outlay for all purposes, right from the beginning to the time, the fourth or fifth years, when the land is completely cleared and through the yearly rotting and burning of the cornstalks, remaining logs and stumps, and thus made ready for tractors or other farming machinery.

The system of planting or "sticking" corn after the "burn" is to line up the negro labor in rows of 10 to 25, each provided with a sharp stick and a bag of seed. Then they proceed, plunging the stick into the soft, ashy bed every two or four feet, dropping in a kernel or two of corn and kicking dirt over and into the seed bed thus made, jumping over and around logs and stumps, keeping one eye, if they follow instructions, to the sight posts across the field and another on their neighbors, in order to keep straight ahead or prevent encroachments on their line.

Thus the corn is "stuck," and the next step for the farmer or developer is to "go and get the crop in the fall." In the meantime no cultivation is usually done, for the fires have so destroyed the weed germs as to make cultivation unnecessary, especially the first year. However, the most successful operators improve their yields for the second and third years by shrubbing and hand cultivation, which locally is called "chopping."

Until the fourth year few operators attempt to place animal or other power upon the soft, humus ground, for experience thus far has shown that it is best to permit "nature to take its course," for within this period of four years most of the logs and stumps rot or burn, the ground settles and becomes firm enough for machinery.

The problems of planting, gathering and cultivation seem primitive, yet are practical. In many instances the corn crops are gathered by having it "toted" out on the back of the colored laborers, who usually contract to "snap" and deliver the corn to the owners on the roadway at a price of 8 to 12 cents per bushel, usually an average of one-quarter-mile haul.

One or another may inquire, does it pay? To these questions the answers are ready, reliable, provable and most encouraging, for many operators practically con-

duct their entire program by contract and are abundantly rewarded from the crop revenue, irrespective of the fact that the land itself is doubling in value once or more within the four-year period cited above.

There are other benefits to a developer and reasons to encourage them in black-land farming than the obtaining of quick or sure profits in growing "stuck corn" by contract, and it seems evident to one who enjoys to participate in or see others benefited by an activity where the basis is of such importance to the nation that here is a business where raw, worthless jungle—the home of bear, deer or reptiles—is transformed through simple, natural and cheap redemption methods into wealth and food-producing broad acres and a lasting benefit to mankind, the safest heritage imaginable to leave to one's family, whether the plans be to have it contracted further, worked or leased, for the most learned in agriculture venture the opinions that these black lands will grow a hundred crops of corn without fertilization and are most properly named by the State agricultural department "Wonderland."

An illustration of what can be accomplished in reclaiming North Carolina swamplands is found in the successful results achieved by Mark W. Potter, who, when not known as the owner of "Broad Acre" and "Potter" farms—black-land farms in Beaufort County, North Carolina—is president of the Carolina, Clinchfield & Ohio Railroad and a member of the law firm of Hornblower, Miller, Garrison & Potter of 24 Broad street, New York city.

Mr. Potter is specializing in Duroc hogs on his "Broad Acre" ranch of about 2000 acres. He expects to carry over into 1919 a herd of 500 brood sows, and, if all goes well and according to the present schedule of increase, he will have to market 5000 or 6000 hogs or from 1,000,000 to 1,200,000 pounds of a superior quality of hog product.

In "Broad Acre" Mr. Potter has now planted to corn 1000 acres; possibly the greater part is yet stuck corn. His manager estimates that they will harvest 50,000 bushels of corn and that this land is expected to produce an average of 75 to 80 bushels of corn per acre as soon as all of the land can be plowed and cultivated.

Mr. Potter's "Potter Farms" development, a short distance from his "Broad Acre" ranch in the same county, embraces 45,000 acres. The first 1500 acres of swamp were burned over and "stuck" with corn in May of this year. Mr. Potter said only recently that he expected to retain from 6000 to 10,000 acres to develop into a real farm. The balance will be disposed of later. Three dipper dredges are working day and night on the "Potter Farms." Some 30 miles of canals thus far are completed, and when this development is drained there will have been dug over 100 miles of main canals according to their schedule there, the purpose being to have ready by May 1, 1919, 6000 acres more ready for the "annual burn," and, of course, immediately thereafter "stuck" to corn.

One would naturally see that Mr. Potter knows and loves land as well as livestock activities, and may it not be likewise seen that he is attempting to do his utmost to assist in feeding mankind as well as promoting steps which will under such efforts as he is advancing more nearly have production and consumption meet equally? He had the foresight to see the need of more food production at the beginning of the European war.

It might here be suggested that farming on a large scale should be taken up by rich men of our land or by organized companies formed for producing farm products, and thus more speedily satisfy the appetite of the hungry. While we see the beginning of the increased interest in farming or assisting financially in backing up legitimate production, there is great room for capitalists throughout the United States to take a leading interest in agriculture and land development.

Garment Factory for Staunton.

From 60,000 to 75,000 garments will be the annual capacity of a factory which the Staunton (Va.) Manufacturing Co. will build. About 200 operatives will be employed and the factory structure will have 10,000 square feet of floor space. Brick, steel and concrete construction, with saw-tooth roof, has been decided upon.

Chemical Works for Memphis.

Capitalized at \$250,000, the Plough Chemical Co. of Memphis, Tenn., has been incorporated to manufacture chemicals. Abe Plough, J. C. Ozier, Ed A. Sabath and others are the incorporators.

Getting Harvest Hands by Telephone New Wrinkle of U. S. Employment Service

[Special Correspondence to Manufacturers Record.]

Washington, D. C., July 5.

Getting the hired man by telephone is the latest institution set in motion by the Farm Labor Division of the United States Employment Service.

The new plan had its inception with the opening of the wheat harvest this year. The first overtures were made by letter from the Farm Labor Division to the farmers' telephone organizations in the Middle West, outlining a system whereby the subscribers could be readily put in touch with the Government's farm-labor machinery. Under the plan proposed, the operators of the telephone companies agreeing to co-operate will call up the farmers during the "slack" season and inform them that the company is ready to fill individual orders for help. When the order is received it is transmitted to the nearest Federal employment office, of which there are now between 500 and 600 in the various States, with more being constantly added.

The first start, that of the "drive" on the main wheat belt, was begun on June 12. In all, there are about 7700 telephone companies which will be addressed. The nature of the replies thus far received indicate an eager acceptance of the plan by the companies. "They took to it like a hungry hound to hot mush," was the manner in which one of the Labor Department officials enthusiastically described the hearty co-operation thus far received. It is estimated that by the time the field is entirely covered the United States Employment Service will be placed at the elbow of 2,000,000 farmers.

"We expect the most beneficial results to follow," said M. A. Coykendall, chief of the Farm Labor Division of the United States Employment Service, to the MANUFACTURERS RECORD correspondent.

"There is an important psychological feature involved in the plan," Mr. Coykendall continued. "The American farmer is a man of deeds, and not a writer of letters. But he'll take down the receiver of his telephone and tell of his needs, when he would often fail to sit down and write. Another point is that most of the managers of the rural telephone companies are practical farmers themselves. This assures an intimate understanding between the farmer and the company as to just what he wants. Details can be gone into, and the farmer feels when he finishes his conversation that he is in a fair way to obtain the proper kind of help."

The replies to the letter sent out to the companies in the Middle West have been altogether favorable to the scheme. Fifty letters were received in the first day's mail on the subject, putting the Farm Labor Division in touch with not less than 25,000 farmers at the very beginning, as each letter represents in the neighborhood of 500 farmers. Here are some of the answers:

From W. E. Crouch, manager Bosworth Telephone Co., Bosworth, Mo.:

"We wish to state here that it will not be necessary for any of the farmers in our territory to call on the Labor Department for help at present, and perhaps not before the summer of 1919, as every business man and boy in our little city is putting in from three to six days every week on the farm helping with the harvest, and just at present we do not know of a farmer that is not getting all the help he needs at the time he needs it."

C. C. Johnson, manager Huntsville Telephone Co., Huntsville, Mo., reports:

"This territory is thoroughly covered by the Huntsville Commercial Club, and has been for the last six weeks, and it has advertised in the two weekly papers (see the clipping enclosed of today's issue), and will continue to do so as long as necessary. While we are willing and will do all we can in this matter, we believe the ground is already being well covered."

J. W. Settle, manager Potosi Telephone Co., Potosi, Mo., says:

"We will do all we can to help out, and gladly give the use of our switchboard and operators at all times to send information."

Dennis Sullivan, secretary Iowa County Mutual Telephone Co., Marengo, Iowa, writes:

"In regard to being of any assistance to the farmers of Iowa county, of whom our stockholders and directors are mostly composed, I will say that our telephone operators will do all in their power to assist in furnishing

information to the farmers of anybody who wants work, of which the farmers will be sorely in need from now on. Anything we can do for the farmers and the Government we will very gladly do."

It will be observed that the letters indicate that farm labor is generally well supplied. This, it was pointed out by the Farm Labor Division officials, is particularly true of the section from which the letters were received, but by no means applies to the country as a whole. The typical feature throughout is the expressed willingness to co-operate to the utmost.

The next "drive" for the utilization of the telephone as an instrumentality in bringing rural labor into contact with the farmer will be made in the South. The plan will be in full movement by the time this article appears. The Farm Labor Division officials have no doubt that the same hearty co-operation will follow there that has been received from the Middle West. But there is another phase of the situation not nearly so promising.

"The thing that gives us the most concern in the South right now," said Mr. Coykendall, "is that the man-power in the Southern States is not employed to the maximum. We know this to be the present situation."

While not going into details, it was evident that the Government officials recognize that farm-labor conditions in the South present a number of perplexing problems not found in other sections. As a whole, the labor is less intelligent, and has been accustomed to a measure of independent action not agreeable to ready and spontaneous response to the emergencies precipitated by the war. They are hoping, however, for effective results, and have already been encouraged by noticeable progress in various districts. Much depends, it has become apparent, upon the local attitude toward loafing. Where adequate laws have been enacted, it remains for the respective communities to see to their effective enforcement. At the same time, this must be made practically universal, else there will be a drift of the irresponsible part of the labor element to the communities where there is a laxity in its handling.

Mr. Coykendall called attention to the Kentucky anti-loafing law recently passed. This, he said, was of the character that "meant business." Under its provisions every able-bodied male resident of Kentucky between the ages of 16 and 60 must work at least 36 hours a week. Otherwise he shall be held as a vagrant and fined not less than \$20 nor more than \$100 for each offense. As a part of his punishment the offender must work not exceeding 60 days upon the public roads or streets, or some other public work. This gives no chance to escape from work through the possession of riches. Lapses into idleness are not tolerated under the Kentucky law, through the fact that each week of idleness constitutes a separate offense. An additional incentive to the enforcement of the law is found in the provision that any peace officer who fails to enforce it is subject to prosecution and removal from office for non-performance of duty.

Asked regarding the results obtained from the waiver of certain sections of the immigration law with respect to the importation of Mexican labor in the Southwestern States, Mr. Coykendall said:

"The only definite report which I have received on this matter was from District Superintendent W. H. Lewis of Texas, in charge of the Texas and Arizona districts.

"Mr. Lewis informs this office that Mexicans are making application for admission into the United States for the purpose of engaging in agricultural pursuits more rapidly than he can handle them, and that he has had to return many of them across the border until the rush was over. Director Lewis has employment offices at every immigration station along the border for the purpose of handling these applicants as they appear. They are anxious to get over."

On and after August 1 subscription price will be \$5.50 per year in the United States.

Great Cane and Corn Crop Outlook in Louisiana—Complaints of Labor Shortage.

New Orleans, La., July 5.—[Special.]—Reports from all parishes in the Louisiana sugar belt at the end of June fix the condition of the cane crop at 95 per cent. of perfect and the corn crop condition is 90 per cent. of normal. The corn acreage is approximately 5 per cent. better than that of 1917. The cane acreage is about the same percentage less than last year.

Such wonderful sugar district prospects from an agricultural standpoint were never before known. In the midst of all of these causes of rejoicing, however, comes the added 25 per cent. sugar-cane intrastate rate approved by the State Railroad Commission, and the labor shortage is daily growing more and more menacing to a full harvest this fall. The growth of the crop, which has been so amazing to even our gray-haired sugar men, is all the more wonderful when it is considered that this great progress has been made notwithstanding the dearth of field labor and the naturally consequent lack of proper tillage and cultivation. In no parish is it possible now to get the maximum degree of cultivation desirable. Most of the fields are more or less grassy now, and will remain so until something is done to solve the labor problem. Not knowing yet what they will be allowed to sell sugar for, the planters are powerless to offer any wage inducements to the negroes. Negro women, who have always been powerful adjuncts to the men in the field, are now becoming somewhat unwilling to work in the manless fields. The Government has refused a low rate from Mexican border points to the sugar and rice districts, by which it was thought to make it financially possible to import labor from South Mexico to avert a disastrous harvesting crisis. One planter who produces both rice and sugar said that the river rice crop, which is the large output of Honduras grade rice raised along the Mississippi River, cannot be saved with the small supply of labor now available. More men are needed, he declared. A great many more men are needed for harvesting cane than for harvesting rice. This river rice crop will be the first food crop harvested in South Louisiana this year. It should begin some time in August. Government officials here are being overwhelmed with appeals for help by planters everywhere, who see a record-breaking cane tonnage in danger of great loss in the sugar parishes this fall. A St. Landry planter said that the whole situation could be summed up in this one sentence: "The question of gathering and saving our crops is our greatest problem."

The blackstrap molasses market in Louisiana, which, together with the low-grade sugars inquiry, had been extremely dull for several months, woke up with a start last week, and out of a supply of something like 10,000,000 gallons still on the plantations anxiously awaiting purchasers, over 3,000,000 gallons were sold. The price paid was never over 14 cents, and some went for a little less, as compared with 20 cents and higher last year. Due to some cause unascertainable, there was very little call for blackstrap this year, although it is the chief ingredient of all prize stock feeds and the raw material for much of the alcohol now used for war purposes. Food administration regulations stopped confectioners from using Louisiana second and third sugars, and the planters thereby could not sell. Delegations of planters and others who went to Washington recently have returned with what they believe to be assurances that the International Sugar Committee will stop the sale of Cuban raws to the confectioners, who used to buy Louisiana low grades.

The American Sugar Refining Co. is making extensive improvements to their importing facilities and wharfe, and the same marked degree of progressive action is in evidence almost everywhere.

Syrup manufacture will be boosted a little more this fall, just as it was greatly increased last year over the year previous. The Jefferson Syrup Co., which is composed of the Penick & Ford molasses interests, is expanding its acreage by the additions of several thousands of acres in the vicinity of their model Dorris syrup factory.

Remarkable Increase in New Orleans Bank Clearings.

New Orleans, La., July 6.—[Special.]—Bank clearings for the first half year reflect the continued progress of New Orleans. The total was \$1,314,243,814, as compared with \$879,663,835 for the same period last year, an increase of nearly half a billion.

Decline in Running to Keep All Essential

Birmingham furnace company the Government be said, the pronounced. I num production stantly, there is obtainable show with same per given to produ is being attaine lated stocks d improvement a mostly respons labor. The cor also ore produ show that in against 210,933 duction in this May, 1917, 253 at 1,270,776 to the same perio be improved an nce, out for re bet the Sloss-S one for repairi repairing is rus for the work.

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In response t the Birmingham H. Aldrich, Sr., and conversion including Alaba of Florida and organizations an except Florida, and perfected o of the provision provisions seek industrial plant make it possibl of raw material of the Governm plants of the B well as those of

July 11, 1918.]

INDUSTRIAL CONDITIONS AT BIRMINGHAM.

Decline in Pig-Iron Production—Steel Mills Running to 90 Per Cent. Capacity—Move to Keep All Industries in District at Work on Essential Production.

Birmingham, Ala., July 8—[Special.]—Southern furnace companies are selling when license is given by the Government. The Government is directing, it can be said, the selling of pig-iron; in fact, the control is pronounced. Despite the dire need for pig-iron, maximum production being sought on all sides and constantly, there is lagging noted in the output, the figures obtainable showing a decided falling off in comparison with same period last year. Every attention is being given to production and delivery of pig-iron. Success is being attained in the movement of iron, the accumulated stocks dwindling steadily. The make shows no improvement and the labor situation is believed to be mostly responsible—not enough labor and inefficient labor. The coal and coke production is unsteady, as is also ore production. The figures available as to make show that in June Alabama produced 200,751 tons, against 210,933 tons in May. In June, 1917, the production in this State was given at 233,830 tons, and in May, 1917, 259,126 tons. For the first six months of this year the pig-iron production in Alabama is given at 1,270,778 tons, as compared with 1,469,674 tons for the same period of 1917. The production will hardly be improved any this month, though the Republic furnace, out for repairs, will be ready again for operation, but the Sloss-Sheffield Steel & Iron Co. will blow out one for repairs. All work of relining and otherwise repairing is rushed, the least possible time being taken for the work.

Southern furnace companies are still hopeful that the Government is going to make some concessions on the price schedule for the quarter, the increased cost of production by reason of freight rates, labor and cost of material figuring heavily in pig-iron production. Discussion is also on in regard to Birmingham being made a basing point, which might bring some relief to the situation.

A number of orders, for small lots of pig-iron continue to come in, but in the main receive but little attention.

Machine shops and foundries are working to maximum, mainly on Government business. Cast-iron pipe plants are doing but little, operations being not more than 50 per cent. of capacity. A few contracts are still in hand or coming in, and are receiving attention. Some of the pipe plants are working on various contracts given by the Government, remodeling of plant being given attention.

Steel mills in the Birmingham district are working more than 90 per cent. capacities. Labor is being sought in every direction for the development on in steel circles with a little success lately, sufficient to give some encouragement. Progress of a pronounced sort is looked for at the Fairfield works of the Tennessee Coal, Iron & Railroad Co. and at the by-product coke ovens from now on.

While but little is being given out in Birmingham as to the fabricating steel plant for shipbuilding steel to be erected by Henry Leon Brittain, who has backing of the United States Shipping Board, it is stated that the deeds to the 50 acres of city property are being worked on and will be ready for delivery within the next two weeks. J. M. Bradley, related to Mr. Brittain, and representing his interests in this district, says that steps are being taken looking to the construction of the plant.

In response to a call by A. C. Crowder, president of the Birmingham Chamber of Commerce, and Truman H. Aldrich, Sr., director of Zone No. 13, of the resources and conversion section of the War Industries Board, including Alabama, Tennessee, Mississippi and parts of Florida and Louisiana, representatives of the civic organizations and manufacturers from the States named, except Florida, held a meeting in Birmingham Friday and perfected organization looking to the carrying out of the provisions of the War Industries Board. The provisions seek to eliminate the non-essentials in the industrial plants during the period of the war and to make it possible for the essentials to get a full supply of raw material and receive other attention at the hands of the Government. Some of the active manufacturing plants of the Birmingham district were represented as well as those of Nashville, Johnson City, Chattanooga,

Memphis and Knoxville, Tenn.; New Orleans, La.; Corinth, Meridian and Jackson, Miss. With Zone Director Aldrich in the lead, an executive committee was formed as follows: Alabama, George W. Conners of the Conners-Weyman Company, Birmingham; Tennessee, John E. Edgerton, Lebanon, president of the Tennessee Manufacturers' Association; Mississippi, R. M. Weaver of Corinth; Louisiana, A. J. Boylan, general manager of the New Orleans Chamber of Commerce. The members of the executive committee will immediately form an advisory committee in their respective States. A general census of the industries of the various States will be taken at once, and other steps outlined looking to the conversion, if possible, of non-essential plants into essential works. The general consensus of the conference in Birmingham was that all plants must be kept going and that such steps must be taken as to make each plant do something towards winning the war.

Howard I. Beal, New York, assistant to the service director of the Atlanta district of the United States Shipping Board, Emergency Fleet Corporation, accompanied by Lieut. Newberry Choyce of the British Army, on furlough and recuperating from shell shock, are in the Birmingham district and making speeches to industrial leaders and employees at industrial plants, arousing interest in the war and urging activity along all lines towards a larger production in order that demands of the Government can be met and so much assistance given in winning the war. Sidney Story, district service manager of the Shipping Board, accompanied by Lieutenant Milson, will spend this week also in the district, working on matters pertaining to the Government's work.

Coal production in Alabama is not coming up to all expectations, and in addition to union leaders, four-minute speakers are visiting the mining camps and making speeches to the mine employees, telling them how important it is for every man to give the best service and to give effort toward a full production.

The scrap iron and steel market is still in an uncertain state, and dealers are just simply rocking along, living in the hopes there will be a change for the better before long. The home consumers are still unwilling to pay the maximum prices for the products they need, some of the articles given in the list of quotations have no market at all in this section, and gatherers of country scrap, from which an assortment is made on local yards, are demanding the highest prices. There is no more gathering of country scrap than is absolutely necessary; in other words, the dealers are laying in no more stock than they think will be needed.

Quotations for pig-iron and scrap iron and steel in the South are as follows:

PIG-IRON.

No. 2 foundry, \$33.50 f. o. b. furnaces.
Basic iron, \$32.00. Next revision due September 1; differentials in grades of iron same as before Government regulations as to prices went into effect.

OLD MATERIAL.

Old steel axes.....	\$30.00 to \$32.00
Old steel rails.....	24.00 to 25.00
Heavy melting steel.....	24.00 to 25.00
No. 1 R. R. wrought.....	24.00 to 25.00
No. 1 cast.....	24.00 to 26.00
Stove plate.....	20.00 to 22.00
Old car wheels.....	25.00 to 26.00
Tramcar wheels.....	21.00 to 22.00
Machine-shop turnings.....	16.00 to 17.00
Cast-iron borings.....	12.00 to 12.50

Increased Reliance on Domestic Graphite Necessitated by Ruling of War Trade Board.

Washington, D. C., July 8—[Special.]—Particular interest will be felt in the graphite districts of Alabama, as well as in other sections, over a recent ruling of the War Trade Board, the outcome of which will to a considerable extent serve to determine the future of the domestic graphite industry.

One of the early rulings of the War Trade Board limited the importation of graphite from abroad, principally from Ceylon and Madagascar, to 5000 tons for the remainder of the current calendar year. While the War Trade Board is reticent as to what followed, it is known that considerable pressure has been brought to bear on the members of that body both for and against the ruling. In the early stages an effort was made by the crucible manufacturers to remove the limitations on graphite importations, while those interested in the development of the domestic industry were in favor of having the imports checked altogether.

The new ruling cuts off entirely for the remainder of the calendar year any further imports of graphite

beyond those permitted through licenses already issued. Such licenses as have been granted cover in all less than 1000 tons, of which a considerable percentage has already been brought in or is now in transit.

Referring to the resolution passed by the War Trade Board within the last week, forbidding the issuance of further licenses in this connection, Fred B. Peterson, director of the Bureau of Imports of the War Trade Board, merely stated that it appeared to that board that the demand for graphite could be met without the issue of any more licenses. Mr. Peterson deprecated the idea that any concert of selfish interests had conspired to interfere with the development of the domestic industry, which, on general principles, deserved encouragement. On the other hand, he indicated that it was not logical to assume that the crucible manufacturers would have any reason for insisting upon the use of foreign graphite for other than purely trade considerations.

This view receives support from such evidences as have been obtained by the Bureau of Mines, whose officials are now engaged in a comprehensive investigation of the graphite situation in the United States.

Harvey S. Mudd of the Bureau of Mines, who is also a member of the War Minerals Committee, said that no particular pressure had been brought to bear upon the members of that committee to continue the importation of foreign graphites. That a prejudice in favor of foreign graphites exists among the crucible makers, however, he said was a well-known fact. At the same time, although many crucible manufacturers insist on using the Ceylon graphite altogether, quite a few are now using 25 per cent. of domestic graphite in their output.

As the situation now stands, there is an entire lack of agreement as to the amount of domestic graphite that may be successfully used. Mr. Mudd said that when the Alabama product is carefully prepared it serves most purposes very well. The main difficulty thus far has been the lack of uniform quality. Mr. Mudd thinks that the domestic product is susceptible of general use, combined in certain proportions with the foreign graphites, and that in many ways it can be used alone. As is generally known, the flake graphite is almost exclusively used in the manufacture of crucibles, while the lower grades find place in the manufacture of facings, lubricants, paints and various other minor ways. According to Mr. Mudd, the domestic milling capacity is ample as to quantity for meeting all local demands, and the quantity now in sight is in excess of the amount that is called for by the market. He pointed out that, although the demand had been greatly increased since the outbreak of the war, there had been a counterbalancing factor created through the more extended use of electric furnaces in the manufacture of high-grade steels, in connection with which there had been a considerable elimination of the use of graphite in the processes employed. To what extent this change in methods might be expected to affect the future of the domestic graphite industry Mr. Mudd said his bureau was not prepared to say, although a study of the situation is now being made.

The Bureau of Mines is now conducting investigations of the graphite industry. One of its mining engineers, George D. Dub, recently visited the Alabama fields, and is now making the circuit of the Pennsylvania and New York graphite deposits. While on the present trip he will confer with the principal crucible manufacturers and importers in an effort to find out just what they can do with the domestic graphite, and will report the results of his investigations upon his return to Washington within the next week or two.

The investigations now in progress by the Bureau of Mines also includes work which has been begun at its Salt Lake station, where a series of experiments in the milling and refining of graphite is now being conducted. At its experiment station at Columbus, O., the bureau is preparing to supplement the Salt Lake experiments with another series which will deal with the properties of crucibles made with different mixtures or proportions of domestic graphites. When the results of these experiments are combined, it is anticipated that they will aid materially in determining just what may be expected of the domestic graphite industry. Although not committing themselves in advance, it is evident that the Bureau of Mines experts are of the belief that their experiments will demonstrate the feasibility of a greater use of domestic graphites than heretofore obtained, and that many of the prejudices in favor of foreign graphites will be overcome in the minds of the crucible makers.

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Coal Production for Week of June 29 Second Largest on Record.

The Geological Survey reports the production of bituminous coal during the week ending June 29 not only exceeded the production of the week of June 22 by 455,000 net tons, or 3.8 per cent., but resulted in the second highest weekly production in history.

The output (including lignite and coal made into coke) is estimated at 12,458,000 net tons, as against 12,003,000 net tons during the week of June 22 and 11,583,000 net tons during the current week of 1917. The average production per working day is estimated at 2,076,000 net tons, an increase over the preceding week of 75,000 net tons, or 3.8 per cent., and over the same week of 1917 of 145,000 net tons, or 7.5 per cent.

Increased shipments during the week ended June 29 were reported from all districts with the exception of central Pennsylvania and Alabama. The decrease from Pennsylvania amounted to 1.8 per cent. and from Alabama 2.4 per cent. Material increases in shipments from the districts, including Northeast Kentucky, high volatile fields of West Virginia and the smokeless fields of West Virginia amount to 13 per cent., from Southwest Virginia 11.8 per cent., from Ohio 10 per cent. and from the Fairmont district 5.7 per cent.

ESTIMATED UNITED STATES PRODUCTION OF BITUMINOUS COAL.

	1918.		1917.	
	Total for week.	Average per working day.	Total for week.	Average per working day.
June 15*	12,606,000	2,101,000	11,504,000	1,917,600
June 22*	12,003,000	2,001,000	11,284,000	1,881,000
June 29†	12,458,000	2,076,000	11,583,000	1,931,000

*Revised from last report. †Subject to revision.

Anthracite shipments increased 471 cars during the week ended June 29, the total movement amounting to 41,641 carloads.

The production of beehive coke in the United States during the week ended June 29 is estimated at 604,000 net tons, a decrease compared with the week preceding of 6000 net tons, or slightly less than 1 per cent. The average production per working day is estimated at 101,000 net tons, as compared with 102,000 net tons during week ended June 22.

The principal operators in the Connellsville, Greensburg and Latrobe districts of Pennsylvania report production for the week ended June 29 at 401,114 net tons, the plants being operated at 77.4 per cent. of their present capacity, in comparison with 75.5 per cent. during week of June 22. Yard labor conditions improved slightly during the week.

The by-product plants of the country were operated at over 90 per cent. of their full-time capacity during the week ended June 29.

The operators reporting produced 496,396 net tons, their plants being operated at 90.5 per cent., as against 89.4 per cent. during the week of June 22. Losses due to labor shortage and repairs to plants decreased during the week causing the improvement.

Material increases in production occurred in Alabama and Pennsylvania. The operators in the former State attribute the improvement to a 100 per cent. coal supply and repaired plants, and the latter State to better labor conditions.

Repairs to plants caused operators in Kentucky to report the only decrease in production.

Large Increase in Rice Acreage in South.

Beaumont, Tex., June 20—[Special.]—The nation's food supply will be greatly augmented this year by the rice growers, according to statement made here today by J. R. Leguene, secretary and statistician of the Rice Millers' Association. Figures compiled by him show the acreage of this year to be greatly in excess of that planted to the Southern cereal last year—1,130,717 against 978,107.

The acreage of the three principal rice-producing States of the South exceeds the entire acreage of the United States last year. Texas increased 10,000 acres, Arkansas 20,000 and Louisiana 75,000 acres. In Texas, Jefferson county comes first in acreage, it having 78,916 acres. Matagorda county comes second, with 40,472.

The estimate of Mr. Leguene for the various States follows:

Louisiana	580,920
Texas	243,608
Arkansas	168,069
California	130,000
Missouri	360
South Atlantic	7,700

Extensive Land Development Plans Outlined for Arkansas.

Glenwood, Ark., June 28—[Special.]—Thirty-one thousand acres of cut-over lands in Pike, Montgomery and Garland counties, Arkansas, lying between this place and Hot Springs, along the Memphis, Dallas & Gulf Railroad and touching on the Missouri Pacific Railroad, will be developed by the Mazarn Valley Land Co. Burton H. Hurd of Collegeport, Tex., is at the head of active management of affairs. Other principals are A. L. Clark, H. C. Bonner of the A. L. Clark Lumber Co. and Professor Reaves, agricultural expert, who is now planning improvements of the properties charted by the Burnham Engineering Co. of this city. The lands are alluvial uplands and valley lands embraced in the Big and Little Mazarn River valleys and the Caddo River on the west. Improvement plans embrace extensive highway building throughout the lands and the building of modern rural school units and at least one demonstration farm especially concerned with high-grade stock and dairy operations, for which the lands are well adapted. Sweet potato, peanut, canteloupe and truck farming will be specialized under community association, organization and consolidated marketing arrangements. Present head offices of the Mazarn Valley Land Co. are at Hot Springs, with plans maturing for making Glenwood the base of shipping and settlement operations.

Twenty-eight thousand acres of land belonging to the dissolved Nashville Lumber Co. have been taken over by interests represented by Vernon Price-Williams, former operator in Florida lands and more recently identified with manganese development of this section. Associated with Price-Williams in the enterprise of development are reported to be P. J. Llewellyn, formerly with the Missouri Pacific Railroad. The lands in question lie along the Memphis, Dallas & Gulf Railroad, a short line that bisects the highlands of Sevier, Little River, Howard, Hempstead, Pike and Montgomery counties. Part of the lands are proven high-class Elberta peach orchard and canteloupe lands, and lie adjacent to the Arkansas Orchard Planting Co. and Bert Johnson orchards that no aggregate over 6000 acres that this year will handle, estimated, 1500 carloads products. Properties have been chartered by Burnham Engineering Co. of this place preliminary to soil classification and segregation of the lands into specialized farming tracts. Plans of sale and settlement have not been made public, but it is construed by the procedure of interests concerned that settlement on the California plan of sale with predetermined improvement and actual settlement of each tract will be the plan of delivery. Plans for 20-year payments on places improved to suit purchaser have been approved as best suited to both the land itself and the class of settlers it is purposed to interest in the lands.

Building Industries to Co-ordinate for War Work.

Under the auspices of the Chamber of Commerce of the United States of America, a convention of representatives of the building industries will be held at Atlantic City on Monday and Tuesday, July 15 and 16. The business of the meeting is to consider ways and means whereby the various divisions of the building industries can find a common ground upon which they may give co-ordinate assistance to the Government during the war; to develop machinery whereby the industries can speak with a united voice upon matters affecting all interests involved, and consider plans for the re-establishment and maintenance of the general prosperity of the industry as a whole.

Will Manufacture Airplane Parts.

A big plant for the manufacture of airplane parts will be built at Louisville, Ky., by the Ohio Falls Dye & Finishing Co. of that city. The principal building will be one story high and 160 feet long by 60 feet wide, in accordance with plans and specifications by D. X. Murphy & Bro. of Louisville. Sanford Vaughn of Louisville is the general building contractor.

\$2,000,000 Coke Plant Reported.

The Sloss-Sheffield Steel & Iron Co., J. W. McQueen, president, Birmingham, Ala., is reported considering, with Government officials, a plan for the investment of \$2,000,000 to build by-product coke ovens which will furnish materials for war purposes.

Commendations, Kicks, Comments**We Surely Need Your Help.**

T. J. MacMAHON, Detroit, Mich.—You have the material for a brilliant bit of patriotic writing, but your stupid, bungling, endless, meaningless repetition mars all this. Get a high school boy or a newspaper reporter to edit it for you, and learn something. I send you 10 illustrations (in our magazine) as to how to edit official documents. You are far, far behind.

Needful Work of Education.

JOHN CLARK, John Clark & Company, Baltimore, Md.—You are doing the foremost work of any publication in the United States in educating the people of this country to their danger, for, as a matter of fact, half of them do not realize Germany's aims, and, unfortunately, some of them do not care.

In Full Accord.

AMERICAN FINANCE & CREDIT CO., 15 Broad Street, New York.—We are in full accord with the policy of your paper, and the writer has been a constant reader for over 2 years.

We are doing our very best to help win the war, and have no doubts as to the final outcome, as we believe firmly in American ability to win any fight we are concerned in.

Thyssen Revelations as Means of Stimulating Patriotism.

C. MARSTON, The Vaughan Lumber Co., Houston, Tex.—Enclosed please find \$1 for which please send me 25 copies of circular entitled "Damning Revelations of Germany's Turpitude." This circular contains, in my opinion, information which should be known by every American citizen, as it would have the effect of stimulating patriotism and knowing what we are fighting for and against.

As a suggestion, it occurs to me that a few of these most startling revelations could be selected for Four-Minute Men, speaking in theaters and other places of amusement, to mention in a forceful way to their audiences. While all of these Four-Minute Men are stimulating patriotism, yet I believe these cold, bare facts would have a wonderful effect on audiences.

Able Exponent of Americanism.

JOHN A. GRAHAM, Graham Investment Co., Bradenton, Fla.—I regard the MANUFACTURERS RECORD as one of the ablest and truest exponents of America's stand in the war with Germany, and feel that a great public service would be rendered if the MANUFACTURERS RECORD could be put each week in the hands of every patriotic and thinking American citizen.

Shoot the Hun or Cage Him.

A. J. BARNES, Advertising Manager Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.—For some time past I have rarely missed the opportunity of reading your splendid editorials telling the unadulterated truth about "Hun frightfulness." But when I read the editorial appearing on the front cover of the July 4 issue I was immediately moved to voice my sentiments of approval.

As an English writer recently remarked: "A Hun is worse than a dog in the manger." Hence, you are right; we must never entertain the thought of extending the "glad hand" to such vipers. It would not only be unjustifiable, but dangerous.

The Hun has shown the American people, as well as the Allies, that he is not to be trusted—doesn't want to be trusted. Hence, what should we do with him? We should either shoot him with his own dum-dums, or cage him as we would a vicious lion, and let him feel the pangs of hunger as he has made the loyal Belgians, French and others.

Keep up your propaganda. It will serve to educate people who are afflicted with a "canary streak." More power to you!

Clear and Unmistakably American.

JNO. W. JACKSON, Postmaster, Palmetto, Fla.—I am enclosing herewith \$5 for renewal of my subscription to your valuable paper. At this crucial period of the world's history, when the melting pot is being heated as never before, I could not afford to be without a periodical whose teachings have always been so clear and unmistakably American. The challenge to the world by the rape of Belgium, the subjugation of Serbia and Roumania, has been answered.

The betrayal of Russia has been answered again with a million men in France, the launching of 100 ships between the rising and the setting of the sun on a day made sacred in every true American heart, which is a new baptism and a renewal of the sacred vows pledged in that memorable paper of 1776.

May the good work continue!

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

RUSSIAN RAILROADS AS THEY ARE.

Joseph E. Greiner of the American Commission Describes Them in Detail.

Joseph E. Greiner of Baltimore, who was a member of the American Railway Commission which went to Russia last year to consult and advise with the Russian Government concerning the improvement of the railroads there, recently delivered an address before the Engineers' Club of Baltimore, in the course of which he related much of important interest concerning the transportation facilities in that country. Among other things, he said that the population of Russia in its entirety is about 170,000,000 people, of whom 15,000,000 were soldiers. The railroads were barely enough to meet needs before the war, and so were entirely inadequate for conditions during hostilities. We have six times the mileage of Russian railroads in one-third of her area, and have only one-tenth of her population per mile of road, so the necessity for increase of facilities there was immediately seen.

The commission left Washington May 9, 1917, and went via Vancouver, Yokohama, Tsuruga and the Sea of Japan to Vladivostok, arriving May 31. Thirteen days were spent in inspecting the Trans-Siberian Railway, and the commission reached Petrograd June 12. Then a number of other lines were inspected, making a total length of 8235 miles viewed by them. A new single-track road building to Kola on the Arctic Ocean was inspected by one member of the party.

Russian railways have a total length of about 43,300 miles, 75 per cent. being single track and 25 per cent. double track. As 4000 miles had come under control of the Germans, there was a little less than 40,000 miles still in Russian hands. Besides, there were about 9700 miles under construction, of which portions were operated temporarily along the military front.

"The so-called Trans-Siberian Railway," said Mr. Greiner, "while a continuous line of tracks from Vladivostok to Petrograd and to Moscow, is not by any means a single railway, as is usually supposed by Americans. The line to Petrograd is made up of six different railways under separate and distinct managements, subject only to a general control at Petrograd. Beginning at Vladivostok, the names of these different railways in their order to Petrograd are Chinese Eastern, Trans-Baikal, Tomsk, Omsk, Perm and the Northern. There is a double track between Vladivostok and Nikolsk, a distance of 68 miles; then a single track between Nikolsk and Katsiky on the Trans-Baikal, a distance of 1237 miles; then a double track (with the exception of a few bridges) between Katsiky and Omsk on the Omsk Railway, a continuous stretch of 2261 miles; between Omsk and Petrograd there is a continuous single track of 1869 miles. This gives a total length of continuous line between Vladivostok and Petrograd of 5435 miles. The Amur line, which has just been finished and is now in operation, branches off from the Chinese Eastern Railway at Nikolsk, extends in a northerly and westerly direction along the Amur River and joins the Trans-Baikal at Katsiky. At Omsk the double-track line separates, one track going to Petrograd, while the other runs directly to Moscow.

"The double-track railway on the Trans-Siberian, between Katsiky and Omsk, a continuous stretch of 2261 miles, is the longest continuous double-track line of railway in the world. The distance from Vladivostok to Petrograd, namely, 5435 miles of continuous railroad, is about $1\frac{3}{4}$ times the distance from New York to San Francisco by the shortest route, and is about $1\frac{1}{2}$ times the length of the Canadian Pacific from its eastern to its western terminal. If the new Amur line be considered as a second track, which to all practical purposes it is, then the Trans-Siberian Railway is a double-track from Vladivostok to Omsk, a distance of about 5506 miles, which is greater than the distance across the American continent.

"There were on the railways at the time of our inspection about 17,000 locomotives, or about 1 to 2.1 miles of road, as against 1 to 4 miles in America, and the average age of all was about 24 years. On some parts of the Trans-Siberian locomotives use wood for fuel and on other parts coal, there being perhaps 15

per cent. of the locomotives in service burning wood. The most numerous class of freight locomotives is a four-axle engine weighing from 50 to 52 tons, and the heaviest engines in service are the American Decapods, weighing 90 tons, with a very few Mallet type, weighing 124 tons. The common 50-ton engines are mere toy locomotives when compared with those used in America. There was a comparatively large percentage of locomotives in bad order, and it was estimated by the authorities that in order to replace the worn-out locomotives and meet the requirements for the next five years of normal business Russia will require yearly 2250 freight engines and 750 passenger engines. There were about 500,000 freight cars, about 13,000 of which are American box cars or gondolas and the balance of them four-wheel Russian 'wagons' of about 16 tons capacity. Compare these wagons with American 50-ton cars. The car shortage was estimated to be 88,000. The railway shops are old and somewhat antiquated in arrangement and equipment, most of the buildings having been constructed 25 years ago.

"The bridges are generally of a good design, being riveted types of structure of German pattern. There are a number of them over 40 years old doing good service. They are kept in good repair, but these very old bridges limit the weight of locomotives which can be operated over them. On the Trans-Siberian Railway there are some bridges which have seen a service of 33 years. They were designed for very light engines, and the most effective engine in service, the American Decapod, weighing 90 tons, was not permitted to operate over them regularly.

"The rails on the Nicholas Railway, between Petrograd and Moscow, are about 85 pounds, while on the other roads the usual rail was from 65 to 67 pounds. The ballast was generally gravel, and the roadbed and track were in fair condition throughout. The Nicholas Railway will compare favorably with the Lackawanna as to service conditions. All the other railways examined were in a good state of maintenance. The standard gauge is five feet for all railroads, except a few minor branch lines which have a narrow gauge of one meter. The joints are laid opposite instead of being staggered as in America.

"It was somewhat surprising to us to find that there was no snow trouble for the easterly 2250 miles of the Trans-Siberian Railway or for a distance of 400 miles west of Irkutsk, and from that point west there were no evidences from the track or elsewhere that there had been any particular trouble from snow. No snow fences are used except on the Perm and the Northern railways, where a strong growth of brush and timber has been cultivated to act as snow fences. There were no right of way fences on any of the lines we examined.

"The Trans-Siberian line has been very poorly located in detail, except across the Trans-Baikal section and in the valley of the Ob, and it will be quite possible to eliminate at least 50 per cent. of the curvature. There were all sorts of reverse curves everywhere, and without any apparent reason for their existence. Double-track bridges, instead of being single structures, such as we build, were twin bridges, placed side by side with a space of several feet between them. This, of course, is much more expensive than a simple double-track bridge such as we build, and all crossings of rivers are made at right angles, which invariably necessitated a reverse curve at end of the structure. Apparently 0.8 per cent. uncompensated grade has been adopted as the lowest that it is necessary to obtain, except in the valley of the Ob, where they have some districts with a 0.6 per cent. maximum. There is a great opportunity for improvements in the lines and grades of the Russian railways."

At Vladivostok the commission investigated the immense amount of freight piled on the docks, along the hills and in other vacant spaces near the docks, about 750,000 tons altogether, including rails, munitions, metal, barbed wire, motor cars, farm machinery, cotton, leather, tallow, oil, etc. This was being shipped on the Chinese Eastern road at the rate of 100 to 120 cars daily, or five to six trains. Two more docks are being built. There was no freight congestion on either this road or the Trans-Baikal, but the Tomsk road was clogged with coal traffic for Petrograd and Moscow, so that this state of things hindered the prompt transportation of the freight from Vladivostok. The Tiaga mines were closed by the machinations of German agents; if they had been operated instead of the Chermkova mines the hauling of 15 coal trains westward daily could have been avoided on 950 miles of line and

thus allowed that number of trains from Vladivostok with miscellaneous freight to come through, making a total of 20 general freight trains every day. There was an improvement in the mining situation before Mr. Greiner left.

There was seen much room for improvement in the way of supplying fuel and water to the engines. Wood and coal were handled by men instead of by machinery and the tanks and pipes for water were too small. Much time was lost in cleaning grates of engines, for there were no cinder pits, the grates being cleaned on the tracks. Moreover, the locomotives were not used to the best advantage, their monthly average being only 140 miles; this could be increased 50 per cent.

FUTURE OF SHORT LINE RAILROADS

1300 Returned to Owners, But Some May Be Taken Back Under Control and All Will Be Supervised.

The President announces that the Railroad Administration has provided that a large number of the short line railroads whose Federal control is deemed neither needful nor desirable will hereafter not be under its authority, but that they will be, as previously, independent of the Railroad Administration. About 1300 short lines, including terminal roads, etc., are affected by this decision, and many of them are industrial lines. But there are 533 other short line railroads which the Railroad Administration decided to keep under its control, making, together with the large roads, a total of 720 lines already under Government control.

It is said that between 300 and 400 of the roads thus relinquished wished to remain under Federal control, and the announcement signed by the President states that the Railroad Administration appreciates the importance of preserving unimpaired the local public service performed by the railroads relinquished, and it is also anxious that no injustice be done to their owners. Maybe the Federal control of railroad systems will unfavorably affect many of these smaller roads with detrimental results to their service and their owners, and therefore, to preserve a status for them as favorable as that they enjoyed during the three-year test period, great care will be taken to see that they are given fair divisions of joint rates, are insured a reasonable rate supply, circumstances considered, and that they are protected against any undue disturbance in the routing of traffic.

To carry out this policy a short line railroad section will be established in the Railroad Administration's division of public service and accounting. This will be under the charge of a manager whose duty will be to ascertain what is necessary to reasonably protect these lines. Some of them may, after all, be taken back under Federal control in cases which seem to be desirable.

The announcement further states that in general the definite policy of the Railroad Administration is to see that all short line railroads receive fair and considerate treatment.

\$2,000,000 for Western Maryland.

It is estimated that the improvements to be made on the Western Maryland Railway at Ridgely, near Cumberland, Md., will cost about \$2,000,000 when finally completed. The work will probably take a year and a half. Anderson Bros. of Altoona, Pa., have the contract. A better connection will be established between the Ridgely and the Knobmount yards by the construction of four tracks, each of 100 cars capacity. At the last-named yard an additional track may also be built. To build the four tracks mentioned, which will be at the upper end of the Ridgely yard, a mountain side will have to be scraped off, necessitating moving of a large amount of earth and rock.

Construction of a line on the eastern side of Knobmount Mountain is also proposed. It will cross the Potomac River near the existing Knobley Tunnel bridge, connecting with the main line in South Cumberland and again crossing the river near the Welton tunnel. A new tunnel will have to be made parallel to Welton tunnel and the road will be double-tracked to North Branch. Freight traffic over the West Virginia division of the Western Maryland will be facilitated by these improvements.

It is again expected that the heavy increase of freight over the main line from Connellsville, Pa., via Cumberland to Baltimore will compel the double-tracking of the main line east of Cumberland, although there were

many long years, which capacity of the Pittsburgh and West Virginia fast coal and Connellsville is no

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many long passing sidings built during the last several years, which have greatly increased the operating capacity of the road. As recently stated, the traffic from the Pittsburgh district and also from coal mines over the Western Maryland compelled the abandonment of the fast express passenger service between Cumberland and Connellsville, and therefore a through train to Chicago is no longer operated.

Wood for Fuel Instead of Coal.

The Southern Pine Association, through its secretary and manager, J. E. Rhodes, New Orleans, has sent a circular-letter to its subscribers, together with a copy of a letter from the War Industries Board, all on the subject of fuel supply for locomotives on logging railroads. It is stated that the Fuel Administration has definitely advised that it will not be able to produce and distribute coal sufficient to meet the demands of domestic consumers and of all the industries, and that it is impossible to meet the demands for coal in that part of the Southern pine belt east of the Mississippi River. Hence all industries that can use wood instead of coal have been requested to do so. It is therefore suggested that wherever possible wood be substituted for coal, and it is assumed that this can be more easily done by manufacturers of lumber than by others, in view of their ready access to forest material. It is further suggested that applications for priority orders for coal be made only for unavoidable requirements.

A Road Saved from the Scrap Heap.

Arrangements have been made to continue operation of the Washington, Potomac & Chesapeake Railroad, a short line which has long led a precarious existence in the southern part of Maryland. It runs from Brandywine, a station on the Pope's Creek branch of the Pennsylvania Railroad, to Mechanicsville, 21 miles, and several months ago, in consequence of its unprofitableness, it was sold for junk to a New York concern, which proceeded to tear up the track preparatory to removal. Then a number of leading men in the section served by the line got busy and subscribed \$75,000 to the stock of a new company to take over the road and run it. It was also arranged to obtain a loan of \$50,000 additional. Then the purchasers of the railroad material were compensated and the road is now to resume service. Henry W. Watson of Philadelphia was president of the line, plans for the extension of which have been entertained for several years.

New Equipment.

It is announced that the Baltimore & Ohio Railroad will receive 166 of the locomotives recently ordered by the Federal Railroad Administration. The total number purchased is about 1400.

United Railways & Electric Co. of Baltimore will soon order 50 new high-speed double-truck airbrake pay-as-you-enter cars for use on its Sparrows Point line to accommodate the large number of shipbuilders now employed at the Sparrows Point plant of the Bethlehem Steel Co. It is stated that the cars will be really bought by the Emergency Fleet Corporation, which will lease them to the railway company with the option of purchase after the war.

B. & O. Statement for May.

The Baltimore & Ohio Railroad statement for May has been issued by the Interstate Commerce Commission. Total operating revenue was \$12,924,480; increase as compared with the same month of last year, \$1,451,225; total operating expenses, \$11,550,765; increase, \$3,248,310; net operating income, \$557,616; decrease, \$2,429,000; total operating revenues for the first five months of the year were \$54,138,000; increase, \$4,241,000; operating expenses, \$53,170,000; increase, \$14,850,000; net operating deficit was \$2,855,000.

Pensioned Men Invited Back to Work.

According to a press dispatch, more than 50 former employees of the Pennsylvania Railroad at Sunbury, Pa., and vicinity, who had been retired under the pension rules of the company, have been notified that they may return to work provided that they can pass a physical test, and that this will not interfere with their pensions. It is further said that many of these men have engaged in other occupations. Some of them are

skilled mechanics. This action by the road was made necessary by the shortage of experienced men for its essential work. Many women are on the waiting employment list.

\$1,000,000 Improvements for the Frisco.

Concerning the recent press report that the St. Louis-San Francisco Railway would spend \$1,000,000 for improvements in the Birmingham district, it is officially stated that the company is figuring on making quite a number of extensions to passing tracks, and a few mechanical rearrangements in that district, such as improvements to water station, engine pits and possibly an interlocking switch plant at Jasper, Ala. None of the plans, however, have been worked out in detail yet, and particulars are therefore not ready for announcement.

Ocilla Southern in Receivership.

M. W. Garbutt of Fitzgerald, Ga.; J. A. J. Henderson and Joseph F. Gray of Ocilla, Ga., have been appointed receivers of the Ocilla Southern Railroad, which, it is said, is unable to meet operating expenses under present conditions. The line is 110 miles long from Perry to Nashville, Ga., via Grovania, Hawkinsville, Rochelle, Fitzgerald, Ocilla, Alapaha and other points. Mr. Henderson is president and Mr. Gray general manager.

Federal Terminal Manager at Washington.

J. B. Warrington, superintendent of the Philadelphia division of the Philadelphia & Reading Railroad, has been appointed terminal manager at Washington, D. C., his authority in the Federal Railroad service extending not only over the Washington Terminal Co.'s property, but also over the terminals of the several railroads and the Potomac yards.

New Terminal Company at Louisville.

The Louisville Bridge & Terminal Railway Co. of Louisville, Ky., has been formed by the consolidation of the Louisville Bridge & Railroad Co. and the Pennsylvania Terminal Railway Co., capital being increased from \$2,500,000 to \$5,000,000.

Change of Presidents.

I. B. Tigrett of Jackson, Tenn., president of the Birmingham & Northwestern Railroad, has also been elected president of the Meridian & Memphis Railway, succeeding W. F. Owen of Mobile, who is now working under the United States Railroad Administration.

Enormous Timber Resources of Russia.

An article in a current magazine by A. J. Sack presents some statistics on Russia's forest resources as a means of paying the billions of dollars due to home and foreign creditors.

The astonishing statement is made by this writer that Russia, including Siberia, has 1,125,000,000 acres of timber, which is 63 per cent. as much as the whole world possesses. This resource is being set aside by Russian economists as a fund to pay the country's debts. The timber must be manufactured and marketed, and the work will require years, but while it is being done the world's markets will be flooded with Russian timber.

The effect on America's business should be considered, observes the Hardwood Record in discussing the article. Except oak, it continues, which is generally known in the market as the Japanese oak, it is not probable that much Russian timber will reach the United States, but it will compete with American lumber in other markets, notably those of Western Europe, and perhaps those of Eastern Asia, Western South America and the Pacific Islands.

"To that extent," says the Hardwood Record, "our lumber business may be hurt by the flood of forest products from Russia. In normal times Germany received 48 per cent. of its lumber imports from Russia, and England's per cent. of timber imports from that source was nearly as large.

"Lumber shipments from Russia will come from the Baltic, from the Arctic coast of Russia proper and Siberia, and from the Pacific coast of the latter country. The principal lumber markets of the world can be reached from those points."

Good Roads and Streets

Bonds Voted.

Blountsville, Ala.—Calhoun county voted \$70,000 bonds for road construction.
Comanche, Tex.—Comanche county voted \$220,000 bonds for road construction.
Jacksboro, Tenn.—Campbell county will issue \$100,000 bonds for building highways.
Liberty, Mo.—Clay county voted \$90,000 bonds for constructing 63-mile highway with bridges and culverts.

Bonds to Be Voted.

Pensacola, Fla.—City votes August 16 on \$50,000 bonds for street grading and paving.

Contracts to Be Awarded.

Fort Pierce, Fla.—St. Lucie county will build 4½-mile hard-surface road.

Knoxville, Tenn.—Knox county has \$16,000 available for road improvements.

Nashville, Tenn.—Anthony Turnpike Co. has been incorporated with \$5000 capital.

Harrisburg, Ark.—Polk county has plans for constructing 9-mile highway costing \$253,100.

Lockhart, Tex.—Caldwell county receives bids until July 8 for building 9-mile gravel highway.

Tusculum, Ala.—Colbert county receives bids until August 5 for grading a 7-mile highway.

Mount Ida, Ark.—Montgomery county has plans and specifications for 9-mile road costing \$14,725.

El Dorado, Ark.—Union county has plans and specifications for clay and sand road to cost \$60,941.

Van Buren, Ark.—Crawford county has plans and specifications for 11-mile macadam highway to cost \$90,531.

Waco, Tex.—McLennan county receives bids until August 1 for 7½-mile bituminous road construction, with bridges.

Contracts Awarded.

Richmond, Va.—City awarded \$14,911 contract for sidewalks paving.

St. Louis, Mo.—City awarded \$45,000 contract for street improvements.

Stamford, Tex.—City awarded \$11,478 contract for street improvements.

Lawton, Okla.—Government awarded \$43,000 contract for building road.

Durant, Okla.—Government awarded \$125,000 contract for road construction.

Fort Smith, Ark.—Sebastian county awarded \$15,000 contract for road paving.

Oklahoma City, Okla.—Government awarded \$47,000 contract for road construction.

Oklahoma City, Okla.—Oklahoma county awarded \$20,000 contract for road building.

Spartanburg, S. C.—Spartanburg county awarded \$120,000 contract for road construction.

Government's War-Time Program of Good Road Construction.

Washington, D. C., July 5.—[Special.]—Road maintenance and road building are as much a part of the war program as the upkeep of the railroads and the establishment of lines of ships. Without the roads, the bringing of motor trucks from the great manufacturing plants in the Middle West to the Atlantic seaboard would all have to be done at the expense of the freight tennage, the construction work at the cantonments would have been seriously hampered by delays in hauling materials, and all the varied activities about the great army camps would be affected by the handicap of bad transportation facilities.

It is a part of the military and economic life of the nation to keep up these roads, and if because of the shortage of men, materials and time, some roads in the country must be neglected, or action to rehabilitate them must be postponed, the roads left unrepaired should necessarily be those having the least relation to the war program.

The important highways of the nation during the period of the war, as defined by Secretary of Agriculture Houston in a recent letter to Arthur H. Fleming, chief of the State Councils Section, Council of National Defense, include only those utilized, or to be utilized, by the military establishment, those which carry a considerable volume of materials and supplies essential to war industries, and those which have a bearing on the production and distribution of food supplies, connecting population and shipping centers with surrounding agricultural areas.

These are the roads which will receive attention while the great conflict is raging in Europe under the war-time policy in road building as outlined by Secretary Houston, and in so far as possible the use of local materials for road building and upkeep will be neces-

sary in order that no additional burdens be placed upon railroad traffic.

To co-ordinate the road work when many of the materials used are under restricted distribution and priority orders rule all shipments of raw materials, the United States Highways Council was formed in the interest of highways problems. It is composed of representatives from the Department of Agriculture, the War Department, the Railroad Administration, the War Industries Board and the Fuel Administration, who form a central agency for the Government on all questions relating to the highways of the nation, reaching out in its activities to the State highway commission in each State.

The administering of the Federal Aid Road Act and the supervising of the Office of Public Roads and Rural Engineering, gives the Agriculture Department a large part of the work upon war time road building. Upon the advice from the Highways Council, however, depend such questions as supplying the road oils, asphalts and other bituminous road materials controlled by the Fuel Administration, the matter of priority production for highways materials controlled by the War Industries Board and the facilities for transporting road materials and supplies which must be furnished by the Railroad Administration.

The work of the Agricultural Department on a system of State highways was progressing favorably when war was declared, and every effort was being made to connect the road systems of the different States with one another to form national road routes.

The Federal Aid Road Act, with an aggregate five-year expenditure of \$160,000,000 from State and local funds, in addition to at least \$200,000,000 spent independently each year by the States, provides that the States must keep up the roads, and that before any money can be spent the roads must be selected and approved with plans, specifications and contracts submitted to the Federal agencies.

Under the provisions of the act the Department of Agriculture had adopted its war-time program, sanctioning work only on the roads of military and economic importance, and it is said that the State authorities are co-operating in the furtherance of the plans.

The military value of such a road system as exists in France has been realized too late in America, but the lesson should be so thoroughly learned in the war that no repetition of the mistake of neglecting the highways can again be possible.

Good Roads Construction in North Carolina.

Raleigh, N. C., July 3—[Special.]—The really immense task of maintaining important highways is at last well under way in North Carolina. So say D. H. Winslow, maintenance engineer of the State Highway Commission, and Charles R. Thomas of the engineering department at the North Carolina College of Agriculture and Engineering at Raleigh.

There are 100 counties in this State, and between last September and May 1, 71 of these requested the State Highway Commission to maintain certain of their roads. The maintenance department of the commission, organized in compliance with the Federal law in securing national aid in road construction, has taken up this big work with a vim.

The growing scarcity of ordinary teams is rapidly increasing the use of tractors and trucks on maintenance work.

At the North Carolina College of Agriculture and Engineering men are specially trained to supervise the maintenance of roads, and many of the counties have put these graduates at the head of their highway work.

Enlarging Scope of Elephant Butte Reclamation Project.

El Paso, Tex., July 5—[Special.]—In order to accomplish in the earliest possible time the complete drainage of the upper valley of the Rio Grande that is embraced in the Elephant Butte reclamation project, the United States Government will soon place in operation a fleet of 10 big dredging machines, each capable of removing 50,000 cubic yards of earth material a month. There became available for this purpose on July 1 a Government appropriation of \$1,500,000. It is claimed that actual operations of the large dredges by the Government show that the earth can be removed at a cost of less than 7½ cents per cubic yard, which is much less than any private bids for the work. When the drainage system of the lands to be watered from the mammoth Elephant Butte reservoir is finished crop production will be enormously increased, it is expected.

TEXTILES

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

Barker Cotton Mills Change Hands.

Mobile, Ala., July 5—[Special.]—The sale of the Barker Cotton Mills of Mobile has been announced by J. A. Rountree, general manager. Hamilton Carhartt Cotton Mills, Inc., with offices and mills at Carhartt and Rock Hill, S. C., are the new owners. The consideration, while not stated, is said to be around half a million.

The Barker mills have been used for the making of cotton toweling and sheeting. Their capacity is 90 bales of cotton a week. According to the new owners, the character of manufacture will not be changed for some time, at least. The mills were taken over on a running basis, and production will not be curtailed.

Mr. Rountree announces that he will manage a large cotton mill at McKinney, Tex. Recently he reorganized the Barker property. School, housing and general sanitary conditions of the Barker mills have been widely commented on as among the most modern conducted in the South, and it was through Mr. Rountree that such a condition obtained.

British Restrictions on Cotton-Mill Operations.

The most recent regulations of the British Cotton Control Board were briefly referred to in a cablegram from the London consulate general transmitted on May 25. The full technical details of the scheme are set out in the following instructions announced by the Board of Trade:

On and after June 10, 1918, and until further notice no spindles or looms in a cotton mill or weaving shed shall run without a license from the Cotton Control Board.

Spinning mills will be licensed to run as follows:

When engaged entirely on Egyptian cotton, on sea-island cotton, on Surat cotton, and waste up to 80 per cent. of the total spindles, 55½ hours per week.

When engaged on American cotton and on other growths up to 50 per cent. of the total spindles, 40 hours per week.

Mixed mills will run 40 hours per week throughout the whole mill, the percentage of spindles to be run varying with the individual case.

American spinners who have not already started spindles on Egyptian cotton will not be permitted to do so after May 8, 1918.

Mule spindles will be subject to the payment of the following scale of levies:

On Egyptian, sea island, Surat and waste (running 55½ hours per week)—

Up to and including 50 per cent. of the total spindles, ¼d. per spindle per week on all spindles working.

Over 50 per cent. and up to 60 per cent. of the total spindles, ¾d. per spindle per week on all spindles working.

Over 60 per cent. and up to 70 per cent. of the total spindles, 1½d. per spindle per week on all spindles working.

Over 70 per cent. and up to 80 per cent. of the total spindles, 5½d. per spindle per week on all spindles working.

Over 80 per cent. of the total spindles, 1d. per spindle per week on all spindles working.

Up to and including 50 per cent. of the total spindles, ¼d. per spindle per week on all spindles working.

Over 50 per cent. and up to 60 per cent. of the total spindles, ¾d. per spindle per week on all spindles working.

Over 60 per cent. and up to 70 per cent. of the total spindles, 1½d. per spindle per week on all spindles working.

Over 70 per cent. and up to 80 per cent. of the total spindles, 5½d. per spindle per week on all spindles working.

Over 80 per cent. of the total spindles, 1½d. per spindle per week on all spindles working.

Note—The above scales refer to mule spindles. A

ring spindle will for all purposes be counted as equal to 1½ mule spindles, and in estimating the total percentage of spindles running, and the levy to be paid, all spindles will be reduced to mule equivalents as hereinbefore.

Levies on Looms—Exceptional Cases.

No weaving shed unless engaged entirely on waste cloths or entirely on Government orders can run more than 40 hours per week.

Licenses will be granted to enable the same number of looms to be run as before the reduced working hours.

For looms up to and including 72 inches reed space (working 40 hours)—

Up to and including 60 per cent. of the total looms, 3d. per loom per week on all looms running.

Over 60 per cent. and up to 70 per cent. of the total looms, 6d. per loom per week on all looms running.

Over 70 per cent. and up to 80 per cent. of the total looms, 9d. per loom per week on all looms running.

Over 80 per cent. and up to 90 per cent. of the total looms, 1s. per loom per week on all looms running.

Over 90 per cent. and up to 100 per cent. of the total looms, 1s. 3d. per loom per week on all looms running.

Note—On all looms over 72 inches reed space the above levies will be doubled.

For looms specially licensed to work 55½ hours, the levies will be increased by 50 per cent.

In cases where firms (either spinners or weavers) are entirely or almost entirely engaged on Government work the Cotton Control Board is prepared to consider the granting of special licenses to work up to a full week of 55½ hours and/or to run an increased percentage of machinery.

The system of "playing off" work people by rotation will henceforth be discontinued, and it will only be permissible to "play off" on Control Board funds operatives who are "played off" continuously through the Regulations of the Cotton Control Board. Any operative thus "played off" will not receive out-of-work payment if he (or she) declines to undertake, when offered, work which in the opinion of the Local Joint Committee is deemed suitable.

The foregoing regulations were issued in amplification of the Cotton (Restriction of Output) Order, 1918, of the Board of Trade, which went into effect as of June 10. This order reads:

1. No person shall work or cause or allow to be worked any spindles or looms in a cotton mill or weaving shed without a license from the Cotton Control Board.

2. The Cotton Control Board may by notice exhibited in the Manchester Royal Exchange prescribe the maximum number of hours that may be worked in cotton mills or weaving sheds, and may vary such number of hours as occasion may require.

3. A license granted by the Cotton Control Board shall specify the number and class of spindles and the number and class of looms that may be worked in the mill or weaving shed to which it refers, and may specify the number of hours that may be worked in such mill or shed. The number of hours may be greater or less than that fixed by the notice referred to in paragraph 2 hereof, according to the number of spindles or looms licensed to be worked, the description of cotton to be used, and the nature and importance of the work on which the mill or shed is engaged.

4. A license shall be for such period and subject to such conditions as to payment or otherwise as the Cotton Control Board may determine.

5. No person shall work or cause or allow to be worked any spindles or looms in excess of the number or for a greater number of hours than that prescribed in such license.

6. The Cotton Control Board may issue instructions prescribing the number of bales of cotton or of any particular growth of cotton that may be put through the bale openers or used in any mill during any week.

7. The Cotton Control Board may require the occupiers of any mill to furnish a return at such times and in such form and verified in such manner as it may direct of the number of bales of all or any growths of cotton put through the bale openers or used in any mill during any week.

8. The occupier of every mill or weaving shed shall on the first working day of every week exhibit in a conspicuous place in his mill or weaving shed a notice stating the number of spindles and looms, and the number of hours which he is licensed to work during the

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week, and shall keep such notice exhibited as aforesaid during the week.

9. All persons shall obey such instructions as may be issued by the Cotton Control Board, and make such returns as may be required by them under this order.

10. No person shall knowingly make any false statement for the purpose of obtaining a license under this order.

11. The expression "person" includes a firm or other association of persons and a company.

The expression "mill" includes any place where yarn or waste is spun.

The expression "weaving shed" includes any place where looms are worked.

12. Infringements of this order are summary offenses against the Defense of the Realm Regulations.

13. This order comes into effect on the 10th day of June, 1918, and as from such day the Cotton (Restriction of Output) Order, 1917, is revoked without prejudice to any matter or thing done or suffered, penalty incurred, or proceeding instituted thereunder.

14. This order may be cited as the Cotton (Restriction of Output) Order, 1918.

Textile Notes.

An additional mill will be built and equipped with 5000 spindles by the Mandeville Mills of Carrollton, Ga.

Contract has been awarded to the Draper Company of Hopedale, Mass., for 40 automatic looms for the Ashcraft Cotton Mills, Florence, Ala.

Plans will be prepared by E. L. Draper of Charlotte, N. C., for a community center development by the Dixie Cotton Mills of Lagrange, Ga.

V. Fontaine of Brevard, N. C., J. C. and C. J. Shamlow of Woonsocket, R. I., have incorporated the Brevard Manufacturing Co. with \$25,000 capital.

The Mountain View Mill, Kings Mountain, N. C., has been organized and purchased the Anna Cotton Mills, which will be changed to the manufacture of waste products.

Knit underwear, 450 dozen suits each week, will be the product of the Mincey Manufacturing Co., Gainesville, Ga., chartered with \$10,000 capital. E. E. Mincey of Gainesville and George T. Penny of High Point, N. C., will organize the corporation.

Hosiery for the Government, 5000 pairs daily, will be manufactured by the Stitchbound Hosiery Mills, Hagerstown, Md. This company has organized with H. E. Stamm as manager and ordered 75 knitting machines. It has secured space in an industrial building.

Plans and specifications are being prepared for a mill which the Okeh Manufacturing Co. will build to spin cotton yarn for the Government. This company was mentioned recently as incorporated with \$75,000 capital by F. H. Cunningham and associates of Greenville, S. C.

Two brick-construction additions will be built by the Mt. Vernon-Woodberry Mills of Baltimore. One will be one story high, 25.7x12.2 feet, and the other four stories high, 32.6x31 feet. Joseph Evans Sperry is the architect and Milton C. Davis is the contractor, both of Baltimore.

New Orleans After Latin-American Trade.

New Orleans, La., July 3—[Special.]—Two new steamers have been ordered into the coffee-carrying trade between New Orleans and Brazil as a result of representations made before the United States Shipping Board. Thus is replaced the tonnage deflected nearly a year ago into New York channels. New Orleans since that time has been depending on sailing ships and motor schooners for her Brazilian trade, and has increased her coffee importations from Guatemala.

In the meantime strong protest has developed here at the proposal of the Shipping Board to route practically all of the Latin-American lines out of New York. The Association of Commerce got into immediate touch with Senator Ransdell, Chairman Hurley of the Shipping Board, and Secretary of Commerce Redfield, voicing the protest of this port. The same argument that is advanced in favor of New York as the European port of this country, it is maintained, applies to New Orleans as the Latin American port. This is especially true now, in view of the \$8,300,000 barge line that Judge Prouty has recommended that the Government establish on the lower Mississippi.

MINING

To Develop Virginia Mines.

Virginia mining properties will be developed by the Stange Mining Co., Narrows, Va., incorporated with \$250,000 capital and these officers: President, Ottomar Stange of Pittsburgh, Pa.; secretary, R. A. Bonnell of Narrows, Va. Another \$250,000 corporation chartered for Virginia developments is the Floyd-Elkhorn Collieries Co., with these officers: S. R. Jennings, president; C. H. Anderson, secretary; both of Johnson City, Tenn.

For Daily Output of 1200 Tons.

A daily production of 1200 tons of coal is planned by the Black Raven Coal Co., Willard, Ky., organized for the purpose of developing 275 acres of coal land. The installation of machinery will include electrical equipment, coal cutters, screens and tippie scales, for which estimates are invited. Officers have been elected as follows: President, J. B. Walker of Greenup, Ky.; secretary, J. M. Maggard of Ashland, Ky.; vice-president and manager, H. W. Norris of Willard.

Tennessee Coal and Timber Development.

Coal and timber land development in Tennessee is planned by the Tennessee Coal Land & Timber Co. of Nashville, which has been incorporated with a capitalization of \$250,000. George L. Mallory, Sigmund Weil and K. E. Sommers, all of Chicago, are the incorporators.

To Mine North Carolina Kaolin.

C. J. Harris, D. R. Harris and S. W. Enloe, all of Dillsboro, N. C., will mine kaolin. They have incorporated the Harris Kaolin Co., with a capital stock of \$400,000.

Big Coal and Coke Company.

Coal mining and coke manufacturing are planned by the Ford Run Coal & Coke Co. of Meridian, W. Va., chartered by Lee J. Sandridge, L. O. Knipp, Harvey E. Thompson, M. A. Osgood and A. H. Miller. The capitalization is \$1,000,000.

Plans for Mississippi River Transportation Development.

New Orleans, La., July 3—[Special.]—A new economic era for the entire South, and especially for New Orleans, is foreseen as the result of Judge Prouty's recommendation to Railroad Administrator McAdoo in favor of the \$8,300,000 barge line on the lower Mississippi. The Government's acceptance of the plan is taken as a matter of course.

Instead of being routed through Eastern ports, the tremendous import and export business of the Mississippi Valley—41 per cent. of the entire country—will pour through New Orleans as a funnel, the rim of which will be Kansas City on the Missouri, Minneapolis and St. Paul on the Mississippi, Chicago on the canal connecting with the Illinois River, and Pittsburgh on the Ohio.

According to present plans, 50 barges, each of 1000-ton capacity, and seven big towboats will be built for the St. Louis-New Orleans trade. There will be seven barges to a train, and two trains a week will arrive at the terminals. They will make an average speed of 10 miles an hour, and they will give cheaper freight.

The problem that now confronts river cities is that of water terminal facilities. A number of these cities have modern facilities in various stages of completion, but, speaking generally, the present terminal facilities are of the old-time, impossible type—cobblestone levees, dray delivery and hand-truck loading. Terminals must be of a type that will allow barges to come alongside, with traveling cranes to load them or lift their freight and deposit it in cars for interior shipment, on an export wharf or the side track of local industries.

Waterproof Cement Products.

Norfolk and Portsmouth manufacturers have incorporated the Waterproof Cement Products Co., Norfolk, Va., with a capitalization of \$100,000. I. D. Ireland of Portsmouth is president and T. S. Nelliger of Norfolk is secretary.

Important Rubber Factory for Waco.

Details have been determined for the plant which the Boone Tire & Rubber Co., Chippewa Falls, Wis., will build at Waco, Tex. They include facilities for the daily production of 750 automobile tires, 750 automobile tubes, solid tires for baby carriages, composition soles and heels for shoe manufacturers, rubber feet and other parts for typewriters, etc., with 150 men employed. A site of 25 acres has been purchased, and four acres of this will be covered by the factory proper, leaving 21 acres for building an industrial city for the plant employees.

The first unit of this plant will represent an investment of \$220,000, of which \$100,000 will be for the buildings and \$120,000 for the machinery. The first buildings will be a 303 by 80-foot main factory, a boiler-room and an administration building, Roy E. Lane of Waco being the architect.

This will be the Boone corporation's third plant. The Chippewa Falls plant has a daily capacity of 750 tires and 750 tubes, while the other, at Sycamore, Ill., has a daily capacity of 250 tires and 250 tubes.

Go to Jail First; Prove Innocence Afterwards.

D. C. EARNEST, Dallas, Tex.

In your issue of June 13 there is a remarkable letter from Mr. Charles A. Prouty, director United States Railroad Administration, concerning advances in freight rates. Mr. Prouty says: "I also wish to assure you that while nothing can apparently be done until these rates go into effect, as they will on June 25, owing to the great amount of labor which is required to even check in tariffs putting in the advances ordered, we shall immediately after the rates themselves are in effect take up and consider the adjustment of all cases which seem to require adjustment."

It would be hard to conceive of anything more utterly unjust than the foregoing statement.

On June 10, 15 days before new rates were effective, I wired Mr. Prouty fully concerning a grave discrimination contemplated against lignite. I showed him that the traffic managers for the railroads were improperly construing General Order No. 28, and that unless he made specific ruling lignite rates would be advanced a minimum of 44 per cent. and a maximum of 100 per cent., while slack coal from Arkansas and Oklahoma, which competes with Texas lignite, would be advanced a maximum of only 33½ per cent. I failed to get any results, and the rates, which grossly discriminate against Texas lignite, have been made effective.

The whole country has been led to believe that the railroads were to receive an advance of 25 per cent.; the people generally acquiesced, because they felt that the railroads were entitled to better rates; but when the people learn that shrewd railroad traffic men have changed classifications and improperly interpreted McAdoo's General Order 28 in such manner as to bring about rate increases from 25 to 400 per cent., they will feel just as I do, that they have been cruelly "buncoed." Mr. Prouty figuratively invites the people to go to jail, but promises them that if they can show good reasons why they should be set at liberty, the matter will be considered.

President Wilson and Mr. McAdoo never intended that the railroads should be permitted to cripple and destroy industries; but due to the fact that these two men cannot personally attend to every detail, the railroads have seen their opportunity, and as usual have taken it.

The labor unions and the railroads were heard before the rate advances were made, but hundreds of thousands of shippers and millions of consumers were not heard.

As far as lignite is concerned, the lignite operators would not complain of any reasonable advance, provided the coal with which it competes was advanced in the same proportion, but to give lignite a minimum advance of 44 per cent. and a maximum of 100 per cent. and only advance coal, with which it competes, 33½ per cent. is outrageous and absolutely indefensible.

Ever since the railroads were taken over by the Government the railroad men have been unable to conceal their delight; they have "gloated" overtime.

If traffic men are to be permitted, without restraint, to publish tariffs which discriminate, then the commercial interests of this country had just as well give a warranty deed to all their possessions to the railroads.

Inasmuch as some of these men of which I complain are now Government appointees, I am, perhaps, guilty of "lese majeste" in criticising them; but I had rather be in jail, provided there are no railroad traffic men there, than to be on the outside and afraid to state facts.

Construction Department

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$20.00 per year.

BRIDGES, CULVERTS, VIADUCTS

Ky., Louisa.—Lawrence County Comms. ordered election for August 3 to vote on 5-year tax for bridge and road construction.

Md., Cumberland.—Western Maryland Ry., H. R. Pratt, Chief Engr., Baltimore, plans construction of bridges across Potomac River near Knobley tunnel bridge, in connection with proposed \$2,000,000 expenditure for trackage and yard improvements.

Md., Riverview.—Anne Arundel County Comms., Annapolis, Md., E. T. Hayman, County Engr., propose to build bridge across South River; plans completed; will also make survey for undergrade crossing at intersection of county road and Short Line Railway, Round Bay.

Mo., Tipton Ford.—City let contract Concrete Steel & Construction Co., Joplin, Mo., at \$15,800 to construct concrete bridge over Shoal Creek; three 50-ft. spans; length 385 ft.; width 20 ft.

Okla., Newcastle.—Government let contract Olson & Magee of Kansas City, Mo., at \$202,800 to construct bridge across South Canadian River.

W. Va., Charleston.—Kanawha County Court, Charleston, and Lincoln County Court, Hamlin, W. Va., let contract C. F. Fogle Co., St. Albans, W. Va., at \$10,000 for masonry work on bridge to be constructed over Coal River at Alum Creek, between Kanawha and Lincoln counties; stone piers; later will let contract for steel superstructure. (Noted in May as inviting bids.)

CANNING AND PACKING PLANTS

Ala., Alabama Port.—Gulf Coast Fishing & Products Corporation organized by A. Smith and Frank Henderson, both of Mobile, Ala.; build \$50,000 oyster and shrimp cannery, ice factory and fish depot; erect storm-proof buildings.

Fla., Chipley.—Chipley Packing Co. has plans for 2-story addition to plant, increasing slaughtering capacity from 25,000 to 30,000 hogs during season; cost \$15,000.

Fla., Titusville.—J. J. Parrish will expend \$20,000 to erect and equip citrus packing plant, daily capacity 6 cars or 1800 boxes fruit; building 1½ stories, concrete base, yellow pine and cypress walls, and metal roof; J. E. Easterly, local contractor.

Ky., Lexington.—Dairy Farm Packing Co. increased capital from \$50,000 to \$125,000.

Mo., St. Louis.—Albert Weber Packing Co. will rebuild burned plant; 2 stories; cost \$10,000.

S. C., Charleston.—Community Cannery chartered with \$10,000 capital by E. H. Burton and Montague Triest.

CLAYWORKING PLANTS

Fla., Melbourne.—Sand-lime Bricks.—L. T. Thresh of Key West, Fla., is reported as interested in plan to establish sand-lime brick plant.

COAL MINES AND COKE OVENS

Ala., Birmingham.—Maxwell Leasing Co. increased capital from \$10,000 to \$20,000.

Ala., Birmingham.—Arnold Coal Co., capital \$2000, inceptd.; J. C. Arnold, Pres., Treas.; B. F. Arnold, V.P.; both of Morris, Ala.; H. E. Gilbert, Secy.-Mgr., Birmingham.

Ala., Birmingham.—Sloss-Sheffield Steel & Iron Co., J. W. McQueen, Pres., is reported considering, with Government officials, plan for \$2,000,000 investment to build by-product coke ovens.

Ala., Dora.—Southern Cotton Oil Co., Birmingham, purchased 920 acres coal land; develop to furnish coal for its mills; invest \$100,000 to install machinery, etc., increasing daily output to 200 tons coal.

Ala., Jasper.—Rainbow Coal Co. inceptd. by D. L. Clark, R. Y. Long and others; capital \$20,000.

Ky., Ages.—Adair Mining Co. organized; J. E. Adair, Pres.-Mgr.; J. S. Greene, V.P.; both of Harlan, Ky.; O. W. Adair, Secy.-Treas., Ages; daily capacity 250 tons. (Lately noted inceptd., capital \$30,000.)

Ky., Bland.—R. C. Tway Coal Sales Co., capital \$100,000, inceptd. by R. C. Tway, L. A. Shafer and Harry A. Shaw.

Ky., Lexington.—Kentucky Coal & Oil Corp., capital \$80,000, inceptd. by Frank M. McKee, John U. Field and Geo. M. Goodwin.

Ky., Lexington.—Engle & Givens Coal Co., capital \$25,000, inceptd. by I. J. Engle, J. G. Given and E. E. O'Hara.

Ky., Lynndale.—Gordon-Miller Coal & Coke Co., 1402 Lincoln Bank Bldg., Louisville, Ky., chartered; capital \$200,000; Ross E. Gordon, Pres.; J. S. Miller, V.P. and Treas.; C. J. Franz, Secy.; J. W. Messamore, Mgr.; purchased Lynndale-Jellico Coal Co.'s property of 875 acres coal lands in Knox County; equipment \$890-ft. railroad switch, camp, etc.; enlarge camp and improve equipment; present daily capacity of 2 cars to be increased to 20 cars within 60 days. (See Machinery Wanted—Cars; Powder; Lumber.)

Ky., Madisonville.—Finley Coal Co. inceptd. by Thos. E. Finley and others; capital \$10,000.

Ky., Marion.—Crittenden Mining Co. inceptd. by Fred J. Fuller, L. J. Clark and W. M. Parish; capital \$100,000.

Ky., Marion.—Ken-See Mining Co., capital \$98,000, inceptd. by F. H. Yost, Dan E. McGugin and V. J. Alexander.

Ky., Marion.—Pasco Mining Co., capital \$20,000, inceptd. by T. H. Cochran, C. B. Hina and W. A. Blackburn.

Ky., Prestonsburg.—Anchor Coal Co. increased capital from \$10,000 to \$20,000.

Ky., Sasasfras.—Montgomery Creek Coal Co., Hazard, Ky., organized; J. W. Reedy, Pres., Lothair, Ky.; S. B. Snyder, Secy.-Treas., Hazard, Ky.; G. W. Smith, Mgr.; develop 1000-acre lease upon completion Carr's Fork extension Louisville & Nashville R. R. (Lately noted chartered, capital \$100,000.)

Ky., Sebree.—New Sebree Mining Co. organized; capital \$100,000; F. T. Patterson, Pres., Birmingham, Ala.; J. D. Smith, Mgr., Sebree.

Ky., Willard.—Black Raven Coal Co. (lately noted inceptd. with \$100,000 capital) organized; J. B. Walker, Pres., Greenup, Ky.; J. M. Maggard, Secy., Ashland, Ky.; H. W. Norris, V.P. and Mgr., Willard; develop 275 acres coal land; daily output 1200 tons coal; install electrical equipment, coal-cutting machines, screens and tippie scales. (See Machinery Wanted—Electrical Equipment; Mining Machinery; Screens; Scales.)

Md., Oakland.—Turner Douglas Coal Co., Clarksburg, W. Va., purchased 200 acres coal land and will continue developments.

Tenn., Bristol.—Mount Hagan Coal Corp., capital \$10,000, chartered; J. S. Dunn, Pres.; Geo. A. Mahoney, Secy.

Tenn., Clairfield.—Standard Jellico Mining Co., 1201 Holston National Bank Bldg., Knoxville, L. R. Eager, Pres.-Mgr., advises Manufacturers Record: Develop 800 acres; daily output 150 tons; increased capital stock to \$50,000; installing compressor and 8 punches. (Increase of capital lately noted.)

Tenn., Jacksboro.—Pine Mountain Blue Gem Coal Co., capital \$5000, inceptd. by J. L. Moore, W. E. Kidnell, J. H. Kidnell and others.

Tenn., Nashville.—Tennessee Coal Land & Timber Co., capital \$250,000, inceptd. by Geo. L. Mallory, Sigmund Well and K. E. Sommers; all of Chicago, Ill.

Va., Bristol.—Floyd-Elkhorn Consolidated Collieries, capital \$250,000, inceptd.; S. R. Jennings, Pres.; C. H. Anderson, Secy.; both of Johnson City, Tenn.

Va., Bristol.—Dixie Fuel Co. chartered; capital \$40,000; R. J. Morris, Pres., Johnson City, Tenn.; John W. Saunders, Secy., Bristol.

Va., Honaker.—Middle Creek Coal Co. inceptd.; capital \$25,000; T. N. Jaugherty, Secy.; both of Richlands, Va.

W. Va., Albright.—P. N. & R. W. Coal Co., capital \$50,000, inceptd. by I. R. Nicodemus of Fairmont, W. Va.; C. W. Powers of Piedmont, W. Va., and others.

W. Va., Charleston.—Hopkins Fork Coal Co., capital \$30,000, inceptd. by Quinn Morton, Walter S. Wood, L. H. Bobbitt and others.

W. Va., Logan.—Donald Coal Co., capital \$50,000, inceptd. by Fred. Haislip, Naaman Jackson, Jas. Bunting and others.

W. Va., Meriden.—Ford Run Franklin Coal & Coke Corp., capital \$1,000,000, chartered by Lee J. Sandridge, L. O. Knipp, Harvey E. Thompson, M. A. Osgood and A. H. Miller; develop coal land in Barbours County.

W. Va., Morgantown.—Little Falls Fuel Co., capital \$100,000, inceptd. by Jos. A. Aronson, Annie S. Levy, Bennett Levy and others.

W. Va., Morgantown.—State Hill Coal Co., capital \$50,000, inceptd. by J. J. Yoke, L. C. Snyder, J. H. Wright and others.

W. Va., Welch.—Middle West Coal Co. inceptd. by Eugene H. Lopinsky, Simon Solin, Harry Kline and others; capital \$200,000.

W. Va., Welch.—Browns Creek Coal Co., capital \$100,000, inceptd. by John E. Stansbury, J. E. Blakely, I. W. Schultz and others.

CONCRETE AND CEMENT PLANTS

Tex., Dallas.—Cement-floor Finishings.—Thermowax Co. increased capital from \$25,000 to \$75,000.

Va., Norfolk.—Cement Products.—Water-Proof Cement Products Co. inceptd.; capital \$100,000; I. D. Ireland, Pres., Portsmouth, Va.; T. S. Nelliger, Secy., Norfolk.

COTTON COMPRESSES AND GINS

Ark., De Queen.—Sevier County Gin Co., H. H. Cooper, Pres., will erect 30x80-ft. ordinary-construction building; no contract; install four 80-saws; electric power; daily capacity 48 bales. (Lately noted inceptd., capital \$10,000.)

Fla., Leesburg.—W. R. Van Sant will establish cotton gin.

S. C., Laurens.—Reedy River Power Co. will rebuild ginhouse at Boyd's Mill plant reported burned.

S. C., Remberts.—J. H. Anderson will build cotton gin.

Tex., Huntington.—Farmers' Gin & Mill Co. chartered with \$5000 capital by J. C. Arnett and others.

DRAINAGE SYSTEM

Miss., Greenville.—Comms. Murphy Bayou Drainage Dist., Washington County, let contract jointly to Canal Construction Co. of Memphis, Tenn., and J. B. Arpin Dredging Co. of Houston, Tex., to construct 70 mi. drainage canals; 2,100,000 cu. yds. excavation; cost \$250,000; district comprises 50,000 acres; Morgan Engineering Co., Engr., Goodwyn Institute, Memphis, Tenn. (Lately noted inviting bids.)

Mo., Warrensburg.—Johnson County Bay Creek Drainage Dist. No. 2, T. O. Hyatt, Clerk, will construct drainage system to include main canal, laterals and levee; cost \$80,000; let contract Chas. Thompson, deids Bldg., Omaha, Neb.

Va., Petersburg.—Government let contract Eli Kull Co., S. A. Reinach, Mgr., Petersburg, for reclamation work at Camp Lee.

ELECTRIC PLANTS

Fla., South Jacksonville.—City voted \$10,000 bonds to extend electric-light, sewer and water systems to 300 dwellings to be erected by Emergency Fleet Corporation. Address The Mayor. (Lately noted to vote.)

Fla., Wauchula.—City votes on \$30,000 bonds to purchase Wauchula Light & Power Co. electric-light plant and \$4000 for additional machinery. Address The Mayor.

Ga., Maxwellton.—Fairview Farms, Raymond L. Pike, Gen. Mgr., Atlanta, will build electric plant. (See Miscellaneous Enterprises.)

Md., Annapolis.—Navy Department, Washington, D. C., will build electric-power plant to cost \$320,000; preparing plans and specifications.

Mo., Holden.—Holden Electric Light Co. will rebuild plant reported burned.

N. C., Charlotte.—American Power & Railway Co. inceptd. by H. M. Victor, C. B. Bryant and D. D. Tryngham; capital \$100,000.

Okla., Garber.—Garber Light & Ice Co. organized; Wm. Musser, Pres.-Mgr.; E. E. Miles, V.P.; H. H. Wilson, Secy.; install electric plant, cost \$10,000; Engr., D. C. Babcock, Garber. Lately noted. (See Machinery Wanted—Electric-light Equipment.)

Okla., Oklahoma City.—Oklahoma Gas & Electric Co. will erect concrete and wood cooling tower; cost \$72,000.

Tex., Wichita Falls.—Northwest Texas Insane Asylum let contract J. C. Dellmann of San Antonio to erect power-house, laundry and other buildings; total cost \$34,000.

FLOUR, FEED AND MEAL MILLS

Ala., Vinton.—Lindsey-Robinson & Co. inceptd.; capital \$200,000; C. G. Lindsey, Pres.; J. E. Robinson, Secy.; purchased Vineyard Mills; daily capacity 50 bbls. flour. Ga., Statesboro.—S. D. Stewart is reported as interested in proposition to establish flour mill.

Mo., Kansas City.—Southwestern Milling Co. will build additional mill; 6 story; 115 ft.; brick, concrete and steel construction; install machinery for daily capacity 3000 bbls. flour; also build 3-story brick concrete and steel warehouse; Leback Contracting & Engineering Co., Kansas City, has buildings contract.

Mo., Lamar.—Thos. Egger will rebuild flour mill reported burned.

S. C., Greenville.—Moore Milling Co. plans increasing capital to \$30,000.

Va., Boone Mill.—Blue Ridge Milling Co., capital \$50,000, inceptd.; M. T. Sink, Pres.; J. M. Kendrick, Secy.

FOUNDRY AND MACHINE PLANTS

Ala., Birmingham.—Steel Ship Plates, etc.—Henry L. Brittain, New York, Pres. of Mobile (Ala.) Shipbuilding Co., V.P. of Terry Shipbuilding Co. of Port Wentworth, Ga., etc., and others, will build plant to manufacture steel plates, shapes and other structural material for Government ships constructed on Atlantic and Gulf coasts; 15-acre site; initial investment \$1,000,000; eventually many millions of dollars; complete first unit within 4 months; this unit employ 2000 men; plant financed by Emergency Fleet Corporation.

Ga., Athens.—Machine Works.—Athen Foundry & Machine Works will increase capital from \$30,000 to \$100,000.

Ky., Louisville.—Cars.—Continental Car Co. increased capital from \$400,000 to \$500,000.

Ky., Louisville.—Welding Plant.—Superior Welding Co. inceptd. by Geo. G. Montz, Elks C. Stocker and Wm. Ritter; capital \$50,000.

Ky., Louisville.—Elevator Works.—American Elevator & Machine Co. will erect four-story to cost \$4000.

Mo., Kansas City.—Boilers.—Kewanee Boiler Co. will erect building; 1 story; 24x36 ft.
Mo., St. Louis.—Brass.—A. Gilbert & Sons Brass Foundry Co. increased capital from \$50,000 to \$100,000.

N. C., Winston-Salem.—Humidifiers.—Bahnsen Humidifier Co. chartered by Fred. F. Bahnsen and others; capital \$100,000.

Okla., Oklahoma City.—Radiator Foundry.—Gastem Radiator Co. chartered with \$25,000 capital by H. K. Hoffman and others.

GAS AND OIL ENTERPRISES

Ala., Gadsden.—Gadsden Oil & Gas Co., capital \$300,000, organized; Otto Agricola, Pres.; A. S. McGregor, V.-P.; J. S. Herring, Secy.-Treas.

Ark., Little Rock.—Superior Oil & Gas Co. chartered; capital \$100,000; J. W. Trieschman, Pres.; W. E. Biggs, V.-P.; C. W. Beale, Secy.

Ky., Covington.—Syndicate Oil Co. inceptd. by C. A. Holloway and others; capital \$100,000.

Ky., Grayson.—Oil Refinery.—Kendall Refining Co., Bradford, Pa., will not build refinery. (Recent report incorrect.)

Ky., Lexington.—Bend Oil & Gas Co. inceptd. by A. L. French and others; capital \$100,000.

Ky., Lexington.—Camden Oil & Gas Co. inceptd. by C. E. Duff and others; capital \$30,000.

Ky., Louisville.—Rosenberg Oil & Drilling Co. inceptd. by Sam Rosenberg and others; capital \$25,000.

Ky., Louisville.—Stoil Oil Co. inceptd. with \$100,000 capital by Chas. C. Stoil and others.

Ky., Sharpsburg.—Mutual Oil & Gas Co. chartered with \$15,000 capital by N. H. Stone and others.

Okla., Ardmore.—Olive Belle Oil Co., capital \$50,000, inceptd. by Jake L. Hamon, Max Westheimer and E. Dunlap.

Okla., Blackwell.—Hill-Co Oil Co., capital \$100,000, inceptd. by W. E. Tredway, W. H. McClure and C. Robt. Bellatti.

Okla., Oklahoma City.—Oil Refinery.—Liquid State Oil & Refining Co., capital \$200,000, inceptd. by W. W. Mitchell and Leo Holland of Oklahoma City, and H. H. Breene of Tulsa, Okla.

Okla., Oklahoma City.—Oil & Gas Belt Petroleum Co., capital \$100,000, inceptd. by J. M. Vanderslice of Oklahoma City, C. E. and Emma Scott of Fort Worth, Tex.

Okla., Oklahoma City.—Kanhoma Oil & Gas Co. chartered with \$100,000 capital by J. H. Montgomery and others.

Okla., Oklahoma City.—Oil Refinery.—Otero Oil & Refining Co. chartered with \$300,000 capital by C. B. Pash, M. M. Thompson and C. M. Walker.

Okla., Okmulgee.—A. to Z. Oil & Gas Co. inceptd. with \$50,000 capital by H. H. Kersey and others.

Okla., Ringling.—Gasoline.—Superior Petroleum & Gasoline Co., Ardmore, Okla., will install second large casing-head gasoline plant.

Okla., Tulsa.—Keys Production Co. chartered with \$100,000 capital by W. H. Brockman and others.

Okla., Tulsa.—Petroleum Products.—Home Petroleum Products Co. inceptd. with \$10,000 capital by A. F. Buck and others.

Tex., Dallas.—Lucern Petroleum Co., capital \$10,000, inceptd. by John White, W. H. Crow and R. R. Fair.

Tex., Eastland.—Oil Refinery.—Great Southern Oil & Refining Co. purchased 4-acre site on which to build oil refinery; daily capacity 2000 bbls.

Tex., Eastland.—Oil Refinery.—O. B. Colquitt, Dallas, Tex., and others will build oil refinery, daily capacity 2000 bbls.

Tex., San Antonio.—Oliver Petroleum Co., capital \$10,000, inceptd. by Van A. Petty, Jr., Dabney E. Petty and J. Clyde Williams.

Tex., Wichita Falls.—Cicero Oil Co. chartered with \$16,000 capital by A. R. McLennan and others.

W. Va., Huntington.—Eastern Imperial Oil Co. (in April noted inceptd., capital \$200,000) organized; Jas. P. McCloskey, Engr.; drill for oil. (See Machinery Wanted—Well-drilling Equipment.)

HYDRO-ELECTRIC PLANTS

Tex., Seguin.—Guadalupe Power Co., W. B. Dunlap, Pres., Beaumont, advises Manufacturers Record: Present plans contemplate development on Guadalupe River; several small plants; install 40,000 K. W. equip-

ment; details not definite; probably not build hydro-electric plant until after war ends; Parsons & Simpson, Engrs., 7 Pine St., New York. (Previously noted organized, etc.)

ICE AND COLD-STORAGE PLANTS

Ala., Alabama Port.—Gulf Coast Fishing & Products Corp. will build ice plant. (See Canning and Packing Plants.)

Ark., Hamburg.—W. E. Foote and Alex. Britton will erect ice factory; purchased machinery.

Ga., Maxwetten.—Fairview Farms, Raymond L. Pike, Gen. Mgr., will build ice factory. (See Miscellaneous Enterprises.)

Md., Annapolis.—Parlett & Parlett, noted in May as to rebuild plant, will erect addition, increasing capacity to 75 tons daily; purchased equipment.

Okla., Garber.—Garber Light & Ice Co. organized; Wm. Musser, Pres.-Mgr.; E. E. Miles, V.-P.; H. H. Wilson, Secy.; has building; install ice machinery, cost \$7000; daily capacity 6 tons. (Lately noted.)

Tex., Beaumont.—R. R. Baker plans \$75,000 company to establish factory with daily capacity 50 tons ice.

Tex., Laredo.—Ray Campbell, San Antonio, Tex., will erect 44x130-ft. brick building, cost \$10,000, for vegetable pre-cooling. (Lately noted to build plant with daily capacity several cars vegetables.)

Tex., Mercedes.—Wetgrove & Co. will erect 1-story-65x100-ft. tile-construction building; cost \$15,000; bldg. opened July 10; has let contract for refrigerating machinery, cost \$30,000; daily capacity, precooling vegetables and about 15 tons ice; H. H. Wetgrove, Pres.; C. A. Carlson, V.-P.; G. C. Borchelt, Secy.; E. J. Pennell, Mgr. (Lately noted.)

Tex., Orange.—Orange Ice, Light & Water Co. will increase daily capacity by 40 tons ice; purchased new machinery.

W. Va., Clarksburg.—Swift & Co. of Chicago will erect cold-storage warehouse; 2 stories and basement; let contract Geo. Schantz Engineering Co., 860 Seneca St., Buffalo, N. Y. (Lately noted.)

LAND DEVELOPMENTS

Ala., Birmingham.—Lake Cohasset Co. inceptd. by J. B. Fellheimer; capital \$5000.

Ala., Muscle Shoals.—Muscle Shoals Realty Co., capital \$100,000, inceptd. by J. M. Summers, S. A. Draper, W. P. Neekamp, all of Huntington, W. Va., and others.

Ark., Glenwood.—Mazern Valley Land Co., Hot Springs, Ark., will develop 31,000 acres cutover lands in Pike, Montgomery and Garland counties, Big and Little Mazern River Valleys; improvements to include roads, schools and one or more demonstration farms for stock and dairy operations; specialize in sweet potatoes, peanuts, canteloupes and truck; Burton H. Heard, Mgr., Collegeport, Tex.; others interested include A. C. Clark and H. C. Bonner of A. L. Clark Lumber Co.

Ark., Glenwood.—Vernon Price-Williams and others acquired 28,000 acres land; develop for farming tracts; surveys by Burnham Engineering Co.

Fla., De Soto City.—De Soto Land & Fruit Co., capital \$200,000, inceptd. by Geo. T. Wood, F. M. Durrance and Robt. C. Logan, all of Louisville, Ky.

Fla., Sarasota.—Sarasota Cattle Co., J. H. Lord, Pres., capital stock \$1,000,000, purchased 40,000 acres land, mainly for raising livestock; also develop agriculturally. (See Miscellaneous Enterprises.)

LUMBER MANUFACTURING

Ala., Jackson.—C. W. Zimmerman will rebuild sawmill reported burned at loss of \$50,000.

Ala., Mobile.—Mobile River Sawmill Co. increased capital from \$50,000 to \$150,000.

Ark., Arkadelphia.—Arkansas Lumber & Supply Co. increased capital from \$10,000 to \$20,000.

Ark., Leslie.—Greener-Putnam Lumber Co. will rebuild plant reported burned.

Ark., Tucker.—Jefferson Hardwood Lumber Co., Thos. R. Ashcraft, Pres., Pine Bluff, Ark., purchased timber tract; oak, cypress, ash and hickory timber; erect band-saw mill with annual capacity 6,000,000 ft.

Fla., Pensacola.—Hutton Lumber Co., capital \$150,000, inceptd.; E. S. Hutton, Pres., Lapel, Ind.; I. A. Dye, V.-P., Monroeville, Ala.; J. W. Bates, Secy.-Treas., Poteau, Okla.

Ky., Louisville.—United Lumber Co., capi-

tal \$50,000, inceptd. by Frank S. Cook, C. Lee Cook and J. F. Schmalzried.

Ky., Louisville.—Louisville Point Firewood Co., capital \$10,000, inceptd. by H. J. Gates, A. A. Brame and L. R. Curtis.

La., Genesee.—Genesee Lumber Co. will rebuild sawmill, planing mill, drykiln and lumber sheds burned at loss of \$25,000.

Miss., Brooksville.—Brooksville Lumber Mfg. Co. inceptd. by T. T. Towles, G. T. Heard, G. W. Cunningham and others; capital \$5000.

Miss., Sardis.—Harrison-Lide Sawmills will rebuild burned plant.

S. C., Charleston.—J. R. Stokes Lumber Co. increased capital from \$10,000 to \$50,000.

N. C., Lumberton.—Robeson County Commissioners have \$39,600 available to construct roads during next 5 years; \$29,800 is contributed by Government.

Tex., Gladstell.—Grogan Mfg. Co. will rebuild sawmill reported burned.

Tex., Fort Worth.—Gulf Coast Hardwood Milling Co. increased capital from \$5000 to \$40,000.

Tex., Hemphill.—J. E. King Lumber Co. will rebuild plant reported burned.

Tex., Houston.—Warren-Cleveland Lumber Co., capital \$100,000, inceptd. by J. K. Warren, Geo. W. Cleveland, Jr., and J. M. Puryear.

Tex., Sherman.—Lyon-Gray Lumber Co. increased capital from \$500,000 to \$600,000.

METAL-WORKING PLANTS

Ky., Louisville.—Sheet Metal.—O. K. Sheet Metal Works, capital \$1200, inceptd. by John V. Kemper, Jacob Keenig and John D. Painter.

Md., Baltimore.—Shrapnel Balls.—John T. Lewis & Brothers Co., 1015 E. Fayette St., will build plant at Baltimore and Ohio R. R. and Columbia Ave.; manufacture shrapnel balls; supply Bartlett Hayward Co.

Md., Baltimore.—Cans.—American Can Co., Maryland Trust Bldg., will erect addition to plant at Boston and Hudson Sts.; 4 stories; 176x105x38 ft.; reinforced concrete and steel; plans by N. M. Loney of New York; following contractors will submit bids: Cogswell-Koether Co., 406 Park Ave.; West Construction Co., American Bldg.; B. F. Bennett Building Co., 123 S. Howard St.; Hicks, Tase & Norris, 106 W. Madison St.; all of Baltimore; White Fireproofing Co. and Turner Bros., both of New York.

MINING

Ala., Attalla.—Iron.—The Alabama Co., Birmingham, purchased 200 acres iron-ore land; continue and extend development.

Ala., Citico.—Iron.—The Alabama Co., Birmingham, purchased 400 acres iron-ore land; continue and extend development.

Ark., Yellville.—Zinc.—Morrison-Lee Mining & Development Co. organized; capital \$50,000; R. E. Lee, Pres., Springfield, Mo.; R. P. Williams, V.-P.; H. C. Morrison, Secy.; both of St. Louis, Mo.; develop 5000 acres zinc land.

Fla., Dunnellton.—Phosphate.—Florida Fertilizer & Milling Co. will establish phosphate plant.

Ky., Louisville.—Rock Asphalt.—Kentucky Rock Asphalt Co. increased capital from \$500,000 to \$650,000.

La., Cote Blanche Island.—Sulphur, etc.—Donelson Caffery, New Orleans, will explore for sulphur, salt or oil; engaged J. B. Moore, Houston, Tex., to drill wells.

N. C., Dillsboro.—Kaolin.—Harris Kaolin Co., capital \$400,000, inceptd. by C. J. Harris, D. R. Harris and S. W. Enloe.

N. C., New Bern.—Mari.—Atlantic Mari & Fertilizer Co., capital \$500,000, inceptd. by J. C. Brown of New Bern, R. S. Freeman of Richmond, Va., and others.

Okla., Grove.—Honey Creek Mining Co. organized; A. C. Veach, Pres.-Mgr.; L. N. Rice, V.-P.; J. C. Hampson, Secy.-Treas.; develop 1000 acres. (Lately noted inceptd., \$200,000 capital.)

Okla., Hobart.—Hare Mining & Milling Co. increased capital from \$125,000 to \$200,000.

Okla., Miami.—Lorane Mining & Royalty Co. increased capital from \$40,000 to \$60,000.

Okla., Tulsa.—I. X. L. Mining Co. inceptd. with \$100,000 capital by R. E. Fountain and others.

Okla., Yale.—Yale Mining Corporation, capital \$75,000, chartered by R. M. Garner, E. F. Tripp and W. B. Hudson.

Tenn., Nashville.—Indian Creek Mining Co., capital \$25,000, inceptd. by Edgar M. Foster, M. C. McGannon, John Branham and others.

Tex., Orla.—Sulphur.—Toyah Valley Sulphur Co., Seaton Keith, Pres., 406 Scanlon Bldg., Houston, Tex., will construct sulphur refining and sulphuric acid plant; retort process; developing sulphur on 1200 acres. (Previously noted.)

Tex., Orange.—Sulphur.—Texas Sulphur Co. (lately noted inceptd. with \$500,000 capitalization) organized; A. C. Fleig, Pres.; A. C. McFarlane, V.-P.; T. M. Todd, Treas.; H. M. Tippet, Secy.; latter advises Manufacturers Record: Own 1331 acres Culberson County sulphur-bearing land; completed plant buildings; 100 tons daily capacity; estimated cost of equipment, \$150,000; contemplate installation Sicilian oven system to extract sulphur; making excavations, building roads, constructing 18-mi. railway from Orla to mines, etc. (See Machinery Wanted—Sulphur Ovens.)

Va., Narrows.—Stange Mining Co. inceptd.; capital \$250,000; Ottomar Stange, Pres., Pittsburgh, Pa.; R. A. Bonnell, Secy., Narrows.

MISCELLANEOUS CONSTRUCTION

Ark., Lake Village.—Levee.—Southeast Arkansas Levee Dist. let contract to R. T. Clark, Lake Village, to construct 150,000 yds. levee. (Lately invited bids.)

Fla., St. Petersburg.—Pier.—W. D. McAdoo plans to construct fishing pier on gulf, extending 20 ft. into water.

La., Baton Rouge.—Levee.—Board State Engineers, Frank M. Kerr, Chief State Engr., 213 New Orleans Court Bldg., New Orleans, ask bids until July 15 to construct Douglas Island Levee, in Caddo parish, Red River, La., right bank; 25,000 cu. yds.; information with State Engrs. (See Machinery Wanted—Levee Construction.)

La., Tallulah.—Levee.—Comms. Fifth Louisiana Levee Dist., O. W. Campbell, Secy., will enlarge levee, Madison parish, Mississippi River, right bank; Harris Field Levee; search ditch and riverside enlargement; 27,000 cu. yds.; bids received by Comms. until July 15 at office Board State Engrs., 213 New Orleans Court Bldg., New Orleans. (See Machinery Wanted—Levee Construction.)

La., New Orleans.—Coaling Facilities.—Dock Board, E. B. Thompson, Pres., will build elevators for handling cargo and bunker coal.

Md., Baltimore.—Pier.—Standard Oil Co., Thos. Goodwillie, Mgr., Pier 2, Pratt St., let contract Raymond Concrete Pile Co., 922 Munsey Bldg., Baltimore, to construct concrete pier between 2d and 3d Aves., Canton; 550 ft. long; 60 ft. wide; fireproof; connect with concrete bulkhead extending from wharf to warehouses.

Md., Cumberland.—Tunnel.—Western Maryland Ry., H. R. Pratt, Chief Engr., Baltimore, contemplates constructing tunnel parallel to Welton tunnel in connection with plans for expending \$2,000,000 for trackage and yard improvements.

Md., Curtis Bay.—Docks.—War Dept., Washington, D. C., will construct 2 docks at Curtis Bay Depot.

Md., Round Bay.—Undergrade Crossing.—Anne Arundel County Comms., Annapolis, Md., will have survey made by E. T. Hayman, County Engr., Annapolis, for undergrade crossing at intersection of county road and tracks of Short Line Railway. (See Bridges, Culverts, Viaducts—Md., Riverview.)

Mo., St. Louis.—Mausoleum.—Mt. Sinai Cemetery will construct mausoleum; 1 story; 14x15 ft.; cost \$4000; J. M. Herschstein, Archt., Century Bldg.; Nickel Marble & Granite Co., Contr.; both of St. Louis.

Va., Hampton.—Dredging.—Government let contract for dredging Sunset Creek to Jas. V. Bukfon, Hampton.

MISCELLANEOUS ENTERPRISES

Ala., Montgomery.—Construction.—Bell Railway Construction Co., capital \$24,000, inceptd. by Wm. R. Bell, W. M. McGowan and B. L. Henderson.

Ark., Little Rock.—Publishing.—Union Publishing Co. chartered; capital \$10,000; Jno. F. Kerwin, Pres.; H. A. Knowlton, V.-P.; L. H. Moore, Secy.

Fla., Pensacola.—Paint Shop.—Navy Dept., Washington, D. C., will construct paint shop and pay office; specification 3109; bids until July 22.

Fla., Sarasota.—Live Stock, etc.—Sarasota Cattle Co., J. H. Lord, Pres., advises Manufacturers Record: Purchased 40,000 acres agricultural land in native grass; will fence and stock with cattle, hogs and goats; plant 1000 acres in feed corn; cultivate rice, velvet

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

beans, etc.; holdings include 10,000 acres bottom land requiring some drainage; mainly live stock project, but sugar development under consideration. (In May, noted inceptd., capital \$1,000,000; J. H. Lord, Pres.; F. W. Lord, V.P.; W. Y. Perry, Secy.; J. H. Lord, Treas.)

Fla., Tampa—Engineering.—McElroy Engineering Co., 410 1/2 Franklin St., organized; Hiram McElroy, Pres.-Treas.; N. M. Holmes, Secy.; Alonzo Wilder, Gen. Counsel; civil, mechanical and drainage engineering, specializing in railroads and drainage. (Lately noted inceptd., \$10,000 capital.)

Ga., Augusta—Laundry.—Hulse Steam Laundry Co., 1975 Ellis St., will rebuild plant reported burned at \$35,000 loss.

Ga., Maxwellton—Dairy.—Fairview Farms organized; Henry E. Watkins, Pres.; Raymond L. Pike, V.P. and Gen. Mgr.; Thos. C. Law, Secy.; all of Atlanta; establish dairy farm; 275 acres; expend \$35,000 for barns, silos, creamery, ice factory, electric plant, etc.

Ky., Pikeville—Hardware.—Forsyth-Briggs Hardware Co., capital \$10,000, inceptd. by Frank J. Forsyth, E. R. Forsyth and Seaton H. Briggs.

Ky., Richmond—Laundry.—Dixie Laundry, Geo. W. Goodloe, Prop., will rebuild plant reported burned at loss of \$25,000.

Ky., Pembroke—Tobacco Stemmy.—W. B. Kennedy will rebuild tobacco stemmy reported burned at loss of \$75,000.

Mo., Charleston—Grain Elevator.—Hutton Grain Co. will erect grain elevator and warehouse; 1 story; 30x100 ft.; Burrell Engineering & Construction Co., Contr., Chicago.

Mo., Kansas City—Laundry.—St. Anthony's Home for Infants is having plans prepared by Madorie & Field, Kansas City, for laundry; 2 stories and basement; 40x50 ft.

Mo., St. Louis—Industrial Building.—Geo. F. Hall Real Estate Co. will erect industrial building; 4 stories and basement; 54x131 ft.; E. J. Hess, St. Louis, preparing plans.

N. C., Asheville—Drying Plant.—Mrs. W. W. Hannaman is interested in plan to erect plant for drying fruits and vegetables; capacity 18 bu. in 4 hours.

N. C., Greensboro—Electrical.—R. H. Milton Electric Co., capital \$25,000, inceptd. by S. R. Morrison, S. G. Milton and L. V. Milton.

Okl., Oklahoma City—Laundry.—New Way Laundry Co. will erect concrete building; cost \$25,000; let contract Gross Construction Co., Oklahoma City.

Okl., Oklahoma City—National Sanitary Service Co. inceptd. with \$100,000 capital by W. B. Frank and others.

Tenn., Nashville—Laundry.—Wage Laundry Co., capital \$6000, inceptd. by Leo E. Wege, G. P. Moore, Jas. Ryan and others.

Tex., El Paso—Printing Plant.—El Paso Printing Co. will rebuild plant reported burned at \$10,000 loss.

Tex., Houston—Dairy.—M. C. Oldham will erect dairy building; 1 story; pressed brick and tile; gravel roofing; cement flooring; cost \$7300.

Tex., Sherman—Grain Elevator.—Pittman & Harrison Co. will rebuild lately-noted grain elevator building of concrete and steel.

Tex., Texarkana—Sweet-potato Curing.—M. E. Melton, Offenhausser Bldg., will erect mill-construction potato kiln, 30,000 bu. capacity, cost \$7500; open building proposals Oct. 1; cure sweet potatoes.

Tex., Wichita Falls—Laundry.—Northwest Texas Insane Asylum let contract J. C. Dellman of San Antonio to erect laundry, powerhouse and other buildings; total cost \$343,048.

Va., Heathsville.—Eubank-Tankard Co. increased capital to \$150,000; acquires and consolidates with Bussells-Hubbard Co.

Va., Hopewell—Plumbing.—Sanitary Plumbing Co. chartered; capital \$15,000; B. McKown, Pres.; J. K. McCotter, Secy.

Va., Norfolk—Mineral Water.—Coppahaunk Mineral Springs Co., capital \$10,000, inceptd.; P. N. Bougades, Pres., Ocean View, Va.; Nick P. Bougades, Secy., Norfolk.

Va., Richmond—Electrical Supplies.—Electric Products Corporation chartered; capital \$150,000; S. O. Lindemann, Pres.; Harold S. Bloomberg, Secy.

Va., Roanoke—Publishing.—Times-World Corporation, capital \$300,000, chartered; J. R. Fishburn, Pres.; W. B. Thomas, Secy.-Treas.

MISCELLANEOUS FACTORIES

Ala., Leeds—Potash.—Standard Portland Cement Co., Charleston, S. C., contemplates installation potash-recovery plant; nothing definite decided.

Ark., Pine Bluff—Bedding.—Turner Bedding Co. will rebuild factory reported burned at \$5000 loss.

Ark., Poplar Bluff—Buttons.—Pocahontas Button Co., Pocahontas, Ark., plans to build branch pearl-button factory.

Fla., Madison—Peanut Oil.—Florida Mfg. Co. will remodel plant for peanut oil manufacture.

Fla., Sarasota—Sugar.—Sarasota Cattle Co., J. H. Lord, Pres., contemplates future sugar development. (See Miscellaneous Enterprises.)

Fla., Tampa—Cigars.—C. H. S. Cigar Co., capital \$500,000, inceptd.; Val M. Antuono, Pres. and Gen. Mgr.; C. O. Munden, Secy.-Treas.

Fla., Tampa—Cigars.—C. H. S. Cigar Co. inceptd.; capital \$500,000; Val M. Antuono, Pres.; C. O. Munden, Secy.-Treas.

Ga., Macon—Bags.—Dixie Bag & Salvage Co., capital \$3000, inceptd. by Wm. Herman, Wm. Wall and Jerome Herman.

Ga., Savannah—Ice-cream Cones.—A. D. Stearns, P. O. Box 623, may establish ice-cream cone factory. (See Machinery Wanted—Cone Machinery.)

Ky., Louisville—Varnish.—Stoll Varnish Co. inceptd. with \$100,000 capital by Chas. C. Stoll and others.

Ky., Covington—Monuments.—Joseph G. Stephany Monument & Mausoleum Co., capital \$5000, inceptd. by Jos. G. Stephany, L. L. Stephany and G. A. Schroetter.

Ky., Lexington—Tobacco.—Central Tobacco Co. increased capital from \$10,000 to \$25,000.

Ky., Louisville—Overalls.—Louisville Overall Co., capital \$10,000, inceptd. by Julius Schuman, John B. Baskin and Albert F. Vaughan.

Ky., Mt. Sterling—Tobacco.—Mt. Sterling Tobacco Redrying & Storage Co. will build factory and warehouse; has plans and specifications; bids until July 15; plans, etc., at office of Mt. Sterling corporation and of J. P. Taylor Co. at Lexington, Ky.

Md., Baltimore—Chemicals.—Cu-Mor Chemical Co., 325 Park Ave., increased common stock from \$50,000 to \$750,000.

Md., Baltimore—Ice Cream.—City Ice Cream Co., 520 N. Calvert St., inceptd. with \$400,000 capital by Asa B. Gardiner, Jr., Albert A. Blakeney, Howard Campbell and others.

Miss., Meridian—Fiber.—Mississippi Fiber Co. will rebuild plant reported wrecked by explosion at loss of \$5000.

Mo., St. Louis—Shoes.—Pedigo-Weber Shoe Co. will erect 6-story factory; cost \$85,000.

Mo., St. Louis—Upholsterers' Supplies.—F. Burkart Mfg. Co. will erect 2-story building costing \$64,750; let contract to I. Segel of St. Louis.

Mo., St. Louis—Cheese, etc.—Louis Maull Cheese & Fish Co., Market St. and Broadway, will erect addition; 2 stories and basement; 50x75 ft.; Nicholas Schweger, Contr., St. Louis; plans by Gustave P. Wues, St. Louis.

Mo., St. Louis—Alpha Realty Co. let contract McCormick-Combo Construction Co., Columbia Bldg., St. Louis, to erect factory; 1 story; 253x147 ft.; plans by A. P. Groves of St. Louis.

N. C., New Bern—Cigars.—El-Rees-Sco Cigar Co., Greensboro, N. C., plans to establish branch factory.

N. C., Charlotte—Novelties.—Green Novelty Co. chartered by E. O. Anderson and others; capital \$10,000.

Okl., Hugo—Peanuts.—Choctaw Peanut Co. organized; L. McLennan, Pres.-Mgr.; Edgar Stevens, V.P.; W. S. Dean, Secy.; let contract to J. G. Shelton, Hugh, to remodel 2-story brick building, adding third story; erect warehouse; plans by Western Engineering Co., Dallas, Tex.; purchased machinery, cost \$1500; produce shelled nuts and by-products. (Lately noted inceptd., capital \$30,000.)

Okl., Muskogee—Gobem Mfg. Co., capital \$100,000, inceptd. by C. E. Chapman and Floyd Little of McAlester, Okla., and Geo. M. Abbott of Buck, Okla.

Tenn., Chattanooga—Crushed Stone.—Hookers Crushed Stone Co., chartered with \$5000 capital by G. H. Jackaway and others.

Tenn., Kingsport—Chemicals.—War Dept., Washington, D. C., will build plant manufacturing chemicals for war purposes; no details available for publication.

Tenn., Memphis—Chemicals.—Plough Chemical Co., capital \$250,000, inceptd. by Abe Plough, J. C. Ozler, Ed. A. Sabath and others.

Tex., North Fort Worth—Soap.—Texas Rendering Grease-Soap Factory, capital \$20,000,

inceptd. by O. C. Bellows, F. J. Meehan and D. E. Mydick.

Tex., Orla—Sulphuric Acid, etc.—Toyah Valley Sulphur Co., Seaton Keith, Pres., 406 Scanlon Bldg., Houston, Tex., will construct sulphur refining and sulphuric acid plant. (See Mining.)

Tex., San Antonio—Leather Products.—Kretschmar Mfg. Co., Trinity and Tampico Sts., organized; J. W. Fitch, Pres., 422 E. Guenther St.; Chas. Kretschmar, Mgr., 615 S. Laredo St.; has building; install machinery to tan and manufacture leather goods; check lines, hame straps, whip lashes, etc. Lately noted. (See Machinery Wanted—Leather-products Machinery.)

Va., Norfolk—Ink.—Jasmine Ink Corporation, capital \$175,000; chartered; J. W. Grumiaux, Pres.; C. W. Hatch, Secy.

Va., Richmond—Envelopes.—Duplex Envelope Co. increased capital from \$50,000 to \$250,000.

Va., Richmond—Paper.—R. A. Cauthorne Paper Co. increased capital from \$30,000 to \$200,000.

Va., Roanoke—Vinegar.—Virginia Brewing Co., Thirteenth St. and Wise Ave., will remodel brewery and install equipment to manufacture vinegar, both grain and fruit; consume daily 1000 to 2000 bu. apples.

W. Va., Kearneysville—Creamery.—Kearneysville Creamery Co., capital \$10,000, inceptd. by E. S. Haller and E. B. Haller of Kearneysville, Jas. N. White of Clarksburg, W. Va., and others.

W. Va., Wheeling—Creasey Corporation, capital \$100,000, chartered by L. L. Creasey of Louisville, Ky.; E. P. Kirsinger and B. N. Heeger of Chicago, and others.

MOTOR CARS, GARAGES, TIRES, ETC.

Fla., Miami—Garage.—J. T. Weathers will erect garage to cost \$2300.

Fla., Miami—Garage.—J. K. Dorn will erect garage; 100x150 ft.; fireproof; reinforced concrete; plate-glass front; probably 3 stories; 2800 sq. ft. floor space; machine shop on first floor; upper floors for storage, with capacity 200 automobiles; cost \$30,000; plans by E. A. Nolan, Miami.

Ga., Albany—Automobile Sales.—Gray Sales Co. will rebuild plant reported burned at \$15,000 loss.

Ga., Rome—Garage.—Gordon L. Hight will rebuild garage reported burned at loss of \$5000.

Ky., Ashland—Taxicabs.—Central Taxicab Co. inceptd. by J. M. Shackelford and others.

Ky., Louisville—Automobiles.—Southern Kor-Ker Sales Co. inceptd. by Fred. H. Chamberlin and others; capital \$10,000.

Md., Annapolis—Garage.—Navy Department, Washington, D. C., will build garage costing \$100,000; preparing plans and specifications.

Md., Baltimore—Garage.—Title Guarantee & Trust Co., St. Paul and Lexington Sts., will build apartment garage; brick and concrete; 1-story; Harwell W. Thomas, Archt.-Contr., Baltimore.

Mo., St. Louis—Automobiles.—Leach Brouster Automobile Co., capital \$8000, inceptd. by H. G. Brouster, Chas. R. Lewis and F. C. Sharp.

N. C., Elizabethtown—Automobiles.—Bladen Auto Co., capital \$12,000, inceptd. by P. R. Smith of Elizabethtown, C. R. Jordan of White Oak, N. C., and E. J. Cox of Clarkton, N. C.

N. C., Charlotte—Automobiles.—Auto Service Co., capital \$10,000, inceptd. by Morgan R. Speir, Guy A. Myers and Clay E. Rutledge.

Okl., Garber—Garage.—R. R. Thorp has plans for and is receiving bids to erect 50x150-ft. brick garage; trussed roof; plumbing and wiring; no heating; plate-glass front; composition roof.

Okl., Oklahoma City—Garage.—Mutual Garage Co. chartered with \$25,000 capital by F. R. Aufrecht and others.

Okl., Oklahoma City—Garage.—W. J. Scrivner will erect brick garage; cost \$4000; C. S. Owens, Contr., Oklahoma City.

Okl., Okemah—Garage.—Central Garage, capital \$3000, inceptd. by Henry Mansur, A. B. S. Bonty and N. A. Taylor.

Okl., Oklahoma City—Automobiles.—Jordan Motor Sales Co., capital \$6000, inceptd. by E. J. Bomaster, L. C. Tharpe and W. K. Whipple; all of Tulsa, Okla.

Tex., Austin—Garage.—Liberty Motor Bus Co. will build garage.

Tex., Dallas—Tires.—General Tire Co. of Texas increased capital from \$15,000 to \$35,000.

Tex., Houston—Garage.—Southern Loan & Investment Co. will erect garage; brick and tile; cost \$6350; let contract J. Miller, Contr., Houston.

Tex., Houston—Motor Trucks and Tractors.—Southern Motor Mfg. Assn. organized; offices in Realty Bldg.; build plant to manufacture motor tractors and truck buildings to cover 342,500 sq. ft.; 50-acre site.

Tex., Houston—Tires and Tubes.—Universal Tire & Rubber Assn., lately noted acquiring 30-acre site on ship channel and to build plant, advises Manufacturers Record: First unit 75 to 100x300 ft., reinforced concrete, steel and glass construction; daylight factory; cost \$125,000, with warehouses additional; purchased machinery, cost \$85,000; daily capacity 500 to 1000 tires and 1500 to 3000 tubes; F. J. Woerner, Archt., Sumpter Bldg., Dallas, Tex.

Tex., Orange—Tractors.—Blumberg Mfg. Co. of San Antonio, Tex., will establish tractor plant.

Tex., San Antonio—Garage.—H. F. Bernhardt will erect garage; brick; cost \$2000.

Tex., San Antonio—Garage.—L. Oge Estate will erect garage; cost \$4000.

Tex., Waco—Automobile Tires, Tubes, etc.—Boone Tire & Rubber Co., I. V. McClure, Pres. and Gen. Mgr., Chippewa Falls, Wis., purchased 24-acre site for plant; 4 acres for factory proper and 20 acres for industrial city; first unit of plant to cost \$25,000; main building 30x80 ft., with boiler, feed and administration building, costing \$100,000; machinery to cost \$125,000; daily capacity 75 tires and 750 tubes for automobiles, competition soles and heels for shoes, solid tires for baby carriages, rubber shoes for typewriters, etc.; Roy E. Lane, Archt., Waco. (Reported in May to build large plant.)

Va., Lee Hall—Garage.—Government let contract Winston & Co., Richmond, to erect 2-story garage; Lieut.-Col. J. C. Marshall, Jr., U. S. N., is in charge.

Va., Portsmouth—Garage.—H. H. Dunn will build 1-story frame garage, costing \$4000.

Va., Roanoke—Automobiles.—Walton Motor Car Co., capital \$15,000, inceptd. by V. D. Johnson, Pres.; Geo. W. Chaney, Secy.

W. Va., Wheeling—Garage.—Chas. H. Eason will erect garage and storage building; 1 1/2 stories; 25x66 ft.; let contract H. A. Hawkins; plans by Geo. H. Dieringer, Ont. Park, Wheeling.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Ala., Jasper.—St. Louis-San Francisco Ry. Co., V. K. Hendricks, Asst. Chief Engr., St. Louis, Mo., contemplates improvements in water station, engine pits and construction of interlocker, in connection with track extension, etc., Birmingham district.

ROAD AND STREET WORK

Ala., Tusculumbia.—Colbert County will gravel 7.71 mi. Jackson Highway, being part of State Trunk Rd. No. 8, between Tusculumbia and Russellville; 12,440 cu. yds. dry gravel; 88 cu. yds. earth excavation; 7.71 mi. machine dressing; County Comms. receive bids until Aug. 5; W. S. Keller, State Highway Engr., Montgomery. (See Machinery Wanted—Road Construction.)

Ark., Harrisburg.—Poinsett County Commissioners have plans by State Highway Comm., Little Rock, for road from Market Tree, Ark., to Crittenden County line; 9 mi. long; 9-ft. concrete surface; macadam shoulders 3 ft. wide; cost \$253,100.

Ark., Boden.—Randolph County Comm., Pocahontas, will build 18 mi. 20-ft. macadam highway from Boden to Dalton; have plans and specifications.

Ark., Dierks.—Dierks Lumber Co. will construct (by day's work) lately-noted 15-mi. dirt highway from Dierks to Newhope; J. C. Leeper, Engr., De Queen, Ark.; has surveyed for road east and west through Howard County, to be constructed in 1919.

Ark., Fort Smith.—Sebastian County Commissioners let contract Southern Bitullic Co. of Memphis, Tenn., to pave Van Buren Road, from northern city limits of Fort Smith to Van Buren; \$15,000 State and Federal aid.

Ark., El Dorado.—Union County Comm. have plans by State Highway Dept., Little Rock, for 20-ft. clay and sand road from El Dorado to county line; cost \$60,941.

Ark., Van Buren.—Crawford County Commissioners have plans by State Highway Dept., Little Rock, for 11-mi. macadam road from Mulberry to Alma; cost \$90,531.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

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Ark., Mt. Ida.—Montgomery County Com-
 missioners have plans by State Highway
 Dept., Little Rock, for 9 mi. graded road,
 from Ouachita River to Forest Reserve,
 known as Mount Ida-Oden Road; cost \$14,725.
 Fla., Blountsville.—Calhoun County Com-
 missioners will construct State-aid graded
 roads; voted \$70,000 bonds; State Good Roads
 Assn., Tallahassee, Fla., in charge of con-
 struction. (County road construction lately
 noted.)

Fla., Fort Pierce.—St. Lucie County will
 construct and hard-surface road 8, 4 1/4 mi.;
 County Commrs., C. H. Edwards, Chrmn.,
 received bids until July 9. (See Machinery
 Wanted—Road Construction.)

Fla., Pensacola.—City Commrs. ordered
 election for August 16 to vote on bonds to
 construct public utilities in connection with
 plans of Emergency Fleet Corporation to
 erect 400 dwellings for ship workers; \$50,000
 bonds to grade and pave streets, \$50,000 to
 construct sewer and drainage system with
 disposal plant in necessary and \$25,000 to
 extend water system.

Ga., Dawson.—City contemplates paying
 streets in business section and Main St. to
 Central Ry. station. Address The Mayor.

Ky., Louisa.—Lawrence County Commrs.
 ordered election for August 3 to vote on
 5-year tax to construct roads and bridges.

Ky., Richmond.—Custodian United States
 Postoffice opened bids for repairs to drive-
 way; R. K. Stone of Richmond is lowest
 bidder at \$2222.

Ky., Whitesburg.—Letcher County Com-
 missioners will construct roads; cost \$10-
 000. State-aid furnishing \$3000 of amount.

Md., Baltimore.—City will construct cement
 footways around city property in various
 sections of city, known as Group No. 12;
 bids until July 17; R. M. Cooksey, Highways
 Engr., City Hall. (See Machinery Wanted—
 Paving.)

Md., Camp Meade.—War Dept., Washing-
 ton, D. C., let contract Claiborne, John-
 son & Co., 910 Garrett Bldg., Baltimore,
 to extend concrete roads connecting roads
 of present camp with those leading to Bal-
 timore and Washington.

Mo., Fayette.—Howard County Commrs.
 will order election on \$700,000 bonds to build
 highways.

Mo., Liberty.—Clay County Court voted to
 issue \$60,000 bonds to construct 63 mi. of
 roads, bridges and culverts.

Mo., St. Louis.—City let contracts for grad-
 ing Kings Highway; Webb-Kunze Construc-
 tion Co. at \$15,655, from Natural Bridge Ave.
 to Penrose Park, and Frulin-Colon Construc-
 tion Co. at \$29,073, from Penrose Park to
 West Florissant Ave.; both contractors
 of St. Louis.

Okla., Durant.—Government let contract
 R. Y. Walker of Oklahoma City at \$125,000
 to construct Federal Project No. 5, road
 from northern city limits of Durant to north
 line of Bryan County.

Okla., Lawton.—State let contract to West-
 ern Paving Co., Oklahoma City, at \$48,110 to
 build 2.68 mi. concrete road from Lawton to
 Fort Sill. (Lately invited bids.)

Okla., Lawton.—Government let contract
 Western Paving Co. of Oklahoma City at
 \$40,000 to construct Federal Project No. 4,
 Fort Sill Blvd., from Lawton city limits to
 south line of Fort Sill military reservation.

Okla., Oklahoma City.—Government let
 contract M. A. Swatek and Western Paving
 Co., both of Oklahoma City, to construct
 Federal Project No. 3, 2 mi. of hard road
 on 23d St.; total cost \$47,000.

Okla., Oklahoma City.—Oklahoma County
 Commrs. let contract M. A. Swatek of Okla-
 homa City at \$26,000 for State-aid road con-
 struction; 1 mi. road on Eastern Ave., north
 from 23d St., 1/2 mi. on Lincoln Blvd., north
 from capital, and 1/2 mi. on Normal Road,
 south from city.

S. C., Conway.—Horry County Commrs.
 will improve 30-ft.-wide roads; estimated
 cost \$30,000; construction by convict force;
 Engr. of State Highway Commn., H. P. Lit-
 tle, Chrmn., Columbia, S. C., in charge.

S. C., Spartanburg.—Spartanburg County
 let contract Southern Paving & Construction
 Co., Chattanooga, Tenn., at \$126,000 to con-
 struct roads to Camp Wadsworth; work in-
 volves portion of National Highway from
 end of paving on W. Main St. and county
 line and Vanderbilt Rd. from Falke and
 Wofford Sta. to camp reservation; brick on
 concrete base; 20 ft. wide; monolithic curb-
 ing; Government to contribute \$63,000 and
 city and county balance. (City lately
 noted to have let contract to Southern Pav-
 ing & Construction Co. to pave sections of

Wofford and W. Main Sts. with vitrified
 brick.)

Tenn., Jacksboro.—Campbell County, J. F.
 Cooper, County Clerk, will issue \$100,000
 bonds to construct roads; R. L. Lloyd,
 Chrmn., County Commrs. (Dixie Highway
 Commrs.)

Tenn., Knoxville.—Knox County Road Com-
 missioners appropriated \$8000 for road im-
 provements: \$2000 to grade Hines Valley Rd.,
 \$3000 for placing rock on Pedigo Rd. and
 \$3000 to improve Raccoon Valley Rd.; invite
 bids for material.

Tenn., Nashville.—Anthony Turnpike Co.,
 capital \$5000, inceptd. by Jas. W. Anthony,
 Jos. E. Anthony and others.

Tenn., Winchester.—State Dept. of High-
 ways, A. M. Nelson, State Highway Engr.,
 Nashville, Tenn., rejected bids for construc-
 tion of 10.66 mi. Federal-aid road, Franklin
 County. See Tenn., Shelbyville. (Bids lately
 noted.)

Tenn., Shelbyville.—State Dept. of High-
 ways, A. M. Nelson, State Highway Engr.,
 Nashville, Tenn., opened and rejected bids
 for construction of 12.26 mi. Tennessee Fed-
 eral-aid road, project No. 3, Franklin County,
 and 10.66 mi., project No. 4, Bedford and
 Moore counties. (Bids lately noted.)

Tex., Breckenridge.—Stephens County,
 Jesse R. Smith, County Judge, defeated
 bonds for road construction. (Lately noted.)

Tex., Comanche.—Comanche County voted
 \$220,000 bonds to construct Oil Belt High-
 way; \$140,000 in Comanche Precinct and \$80-
 000 in De Leon Precinct. Address Comanche
 County Commrs. (Lately noted to vote.)

Tex., Lockhart.—Caldwell County will re-
 pair and construct 9 mi. gravel road between
 Lockhart and Niederwald; bids received
 until July 8; W. O. Washington, Engr.,
 Lockhart; J. T. Ellis, County Judge. (See
 Machinery Wanted—Road Construction.)

Tex., Stamford.—City let contract at \$11,478
 for street improvements. Address The
 Mayor.

Tex., Waco.—McLennan County will grade,
 gravel and surface with bituminous material,
 also construct bridges, 7 1/2 mi. of Waco-
 Marlin Rd., State Highway No. 2, Federal-
 aid Project No. 12; County Commrs.' Court
 receives bids until Aug. 1; Manton Hannah,
 County Engr. (See Machinery Wanted—
 Road Construction.)

Va., Richmond.—City let contract C. S.
 Luck of Richmond to improve Government
 Road from Gilles Creek to National Cem-
 etery; repairs to consist of filling holes with
 asphaltic mixture and coated with asphalt;
 Chas. E. Holling, City Engr. (Noted in May
 as inviting bids.)

Va., Richmond.—City let contract J. L.
 Anderson, Richmond, at \$14,911 to pave
 sidewalks on north side of Broad St., from
 Bowe St. to Blvd.

Va., Roanoke.—G. E. Hess has 3 contracts
 for sidewalk paving to cost \$25,000.

W. Va., Moundsville.—Marshall County
 Court approved plans of S. Howe Bonar,
 County Engr., for narrow road, between
 Moundsville and Wheeling; center of
 cement; brick at edges; 24-ft. roadbed for
 1.1 mi.; curb at outer edge; State Roads
 Commn. to furnish \$15,000.

SEWER CONSTRUCTION

Ark., Waldron.—City retained O'Neil Engi-
 neering Co., 1505 Praetorian Bldg., Dallas,
 Tex., to prepare plans for sewer and water-
 works construction; cost \$45,000.

Fla., Leesburg.—City will construct storm-
 water sewer system; 2187 ft. salt-glazed vitri-
 fied pipe ranging from 24 to 30-in. diam.;
 bids until July 22; W. M. Francisco, Engr.,
 Zephyrhills, Fla.; W. H. Porter, City Clerk.
 (See Machinery Wanted—Sewer Construc-
 tion.)

Fla., Pensacola.—City Commrs. ordered
 election for August 16 to vote on \$50,000
 bonds to construct sewer and drainage sys-
 tem, with disposal plant if necessary, for
 Emergency Fleet Corporation's townsite de-
 velopment comprising 400 or more dwellings
 for shipworkers. (See Road and Street
 Work.)

Fla., South Jacksonville.—City voted \$100-
 000 bonds to extend sewer, water and elec-
 tric-light systems to 300 dwellings to be
 erected by Emergency Fleet Corporation.
 Address The Mayor. (Lately noted to vote.)

N. C., Durham.—City let contract for
 Hated, Yancey and Shepard Sts. sewer con-
 struction at \$9000 to Blakenship & McClell
 Van Co., Durham. (Lately noted inviting
 bids.)

N. C., Durham.—Durham County Commrs.,

J. S. Carr, Jr., Chrmn., will construct sewer
 system for county home.

Okla., Avant.—City will have plans for
 storm sewer and water-works construction
 prepared by O'Neil Engineering Co., 1505
 Praetorian Bldg., Dallas, Tex. (See Water-
 works.)

Tex., Waco.—City has revised plans for ex-
 tension of sewer system and construction of
 sewage-disposal plant calling for expendi-
 ture of \$552,000 instead of \$225,000, amount of
 bonds voted in Jan.; new plans provide for
 larger disposal plant than at first contem-
 plated and further sewer extensions to con-
 nect with Camp MacArthur; will vote on
 additional bond issue of \$327,000; E. McCul-
 lough, Mayor. (Lately noted to have let con-
 tract Isaacs-Worham Construction Co. of
 Waco at \$4211 to construct Cameron Park
 extension of sewer system to connect with
 Camp MacArthur.)

Tex., Del Rio.—City will construct sewer
 system; cost \$50,000; date of opening bids
 not set; O'Neil Engineering Co., Engr., 1505
 Praetorian Bldg., Dallas, Tex. (Lately
 noted.)

Va., Richmond.—City let contract H. L.
 Driscoll of Richmond to construct sewer in
 Meadowbridge Road, between Valley Road
 and Cannon St.; cost \$3965.

SHIPBUILDING PLANTS

Ala., Mobile.—Steel Steamships.—Mobile
 Shipbuilding Co. reorganized; capital stock
 \$1,000,000; H. L. Brittain, Pres.; Geo. D.
 Brittain, Secy.-Treas.; both of New York;
 Frank McLaughlin, Gen. Mgr. and Asst. to
 Pres., Mobile; latter advises Manufacturers
 Record: Plan installation forge and flang-
 ing shop to fabricate bending and bevel
 portions of ships to be fabricated; also
 fabricating shop with monthly capacity 3500
 tons; has new contract from Emergency
 Fleet Corp. to build twelve 5000-ton all-
 steel steamships costing \$1,000,000 each.

Fla., Bradenton.—Ships.—M. V. Chees-
 man plans organizing company to establish
 shipyard.

Ga., Brunswick.—Steel Steamships.—Brun-
 swick Marine Construction Corp. will add fa-
 cilities for constructing steel steamships;
 has Government contracts.

La., New Orleans.—Concrete Steamships.—
 Delta Shipbuilding Co. organized; R. B.
 Sanford, Pres., Metropolitan Bank Bldg.,
 New Orleans; J. W. Stromberg, V.-P. and
 Engr., Chicago; purchased 40-acre site on
 Mississippi River; build plant to construct
 concrete steamships.

Md., Baltimore.—Steel Steamships.—Emer-
 gency Fleet Corporation contemplates build-
 ing 10-ways shipyard to construct Govern-
 ment steel steamships; Bethlehem Steel Co.,
 Sparrows Point, Md., to manage plant.

Md., Crisfield.—Wooden and Steel Ships.—
 Crisfield Shipbuilding Co. advises Manufac-
 turers Record: Jas. B. Tawes, Pres.; R.
 F. Gibson, V.-P.; J. Millard Tawes, Secy.-
 Treas.; L. J. Nilson, Gen. Mgr.; location
 on principal waterfront; acquires shipyard
 of J. B. Nelson and property of Tawes &
 Gibson, with waterfront of 370 ft. one way
 and 700 ft. at right angles; use buildings
 and woodworking machinery of Tawes &
 Gibson in the new plant; capacity to build
 four 240-ft. vessels at one time, also 6 smaller
 craft; contemplates gradually taking up
 steel construction, establishing building and
 repair-yard for medium sized vessels; will
 equip as machine and boiler shops 2 build-
 ings already constructed; has initial
 contract for 5 Government tug boats. (Lately
 noted organized, etc., acquiring marine rail-
 way and other shipbuilding facilities, etc.)

N. C., Wilmington.—Steel Steamships.—
 Carolina Corp. will build 1-story, 280x50-ft.
 mould loft building; structural steel frame
 with galvanized steel walls; 20,000 sq. ft.
 floor space. (Previously noted organized to
 build \$3,500,000 plant for steel steamship con-
 struction, \$2,000,000 being for plant construc-
 tion and \$1,500,000 for plant machinery, etc.)

Tex., Orange.—Ships.—Orange Maritime
 Corporation will rebuild shipbuilding plant
 reported burned at loss of \$100,000.

TELEPHONE SYSTEMS

Ark., Mt. Ida.—Consolidated Telephone Co.
 inceptd. with \$15,000 capital; C. Cox, Pres.;
 John L. McConnell, Secy.

N. C., Raleigh.—Southern Bell Telephone
 & Telegraph Co., Atlanta, Ga., will erect
 additions to cost \$7000.

TEXTILE MILLS

Ala., Florence.—Cotton Cloth.—Ashcroft
 Cotton Mill plans to add 40 automatic looms;
 contract awarded.

Ga., Gainesville.—Kult Underwear.—Mincey
 Mfg. Co. chartered by E. E. Mincey of
 Gainesville, and Geo. T. Penny of High
 Point, N. C.; capital \$10,000; build mill with
 weekly capacity 450 doz. suits knit under-
 wear.

Md., Hagerstown.—Hosiery.—Stitchbound
 Hosiery Mills organized; H. E. Stamm,
 Mgr.; secured space in industrial building;
 ordered 75 knitting machines; daily capacity
 5000 pairs hose for Government.

Md., Baltimore.—Cotton Cloth.—Mt. Vernon-
 Woodberry Mills will build 2 additions; brick
 construction; 2 stories, 12 1/2x25.7x12.6 ft., and
 4 stories, 32.5x31 ft.; Jos. Evans Sperry,
 Archt., 409 Calvert Bldg.; Milton C. Davis,
 Contr., 15 E. Fayette St., both of Baltimore.

N. C., Brevard.—Textile Products.—Brevard
 Mfg. Co. inceptd. with \$100,000 capital by V.
 Fontaine of Brevard, J. C. and C. J. Sham-
 bow of Woomsocket, R. I.

N. C., Charlotte.—Cotton Yarn.—Fidelity
 Mfg. Co. will erect cotton yarn spinning
 mill building to cost \$3000.

N. C., Kings Mountain.—Cotton-waste Pro-
 ducts.—Mountain View Mill organized; pur-
 chased Anna Cotton Mills; convert to manu-
 facture of waste products.

S. C., Wellford.—Cotton Yarn.—Forest
 Prince Mfg. Co. organized; capital \$35,000;
 Henry M. Cleveland, Mgr., Spartanburg,
 S. C.

WATER-WORKS

Ala., Florence.—City, M. M. Striplin,
 Mayor, will vote July 23 on \$300,000 bonds
 for schools and water system. (Amount of
 proposed bonds for water-works, etc., lately
 noted as \$175,000.)

Ala., Jasper.—St. Louis-San Francisco Ry.
 Co., V. K. Hendricks, Asst. Chief Engr., St.
 Louis, Mo., contemplates improvements in
 water station. (See Railway Shops, Ter-
 minals, Roundhouses, etc.)

Ark., Waldron.—City will construct water-
 works and sewers at cost of \$45,000; plans
 by O'Neil Engineering Co., 1505 Praetorian
 Bldg., Dallas, Tex. (Lately noted.)

Fla., South Jacksonville.—City voted \$100-
 000 bonds to extend water, sewer and electric-
 light systems to 300 dwellings to be erected
 by Emergency Fleet Corporation. Address
 The Mayor. (Lately noted to vote.)

Fla., Pensacola.—City Commrs. ordered
 election for August 16 to vote on \$25,000
 bonds to extend water system to supply
 Emergency Fleet Corporation's townsite de-
 velopment comprising 400 or more dwellings
 for shipworkers. (See Road and Street
 Work.)

Ky., Morganfield.—City plans to construct
 water-works. Address The Mayor.

Mo., Harding.—City engaged W. B. Rollins
 & Co., Kansas City, as engineers for water-
 works; Geo. E. Kelson, City Clerk. (Lately
 noted as planning \$18,500 bond issue.)

N. C., Raleigh.—City Commrs. let contract
 Tucker & Laxton of Charlotte to install
 additional machinery and intake at water-
 works; equipment will include 500,000-gal.
 concrete construction filter, 4,000,000-gal.
 motor-driven centrifugal pump and 5,000,000-
 gal. steam turbine-driven centrifugal pump;
 intake will extend from reservoir at Lake
 to Raleigh to pumphouse and require 3300
 ft. 24-in. wood pipe and specials; contract
 let for piping; total cost \$40,000; Gilbert C.
 White, Engr., Durham, N. C. (Lately noted
 inviting bids.)

Okla., Avant.—City will have plans pre-
 pared by O'Neil Engineering Co., 1505 Prae-
 torian Bldg., Dallas, Tex., for water-works
 and storm sewer construction. (Bond issue
 lately noted contemplated for water-works.)

Okla., Lawton.—Government appropriated
 \$100,000 to install water filtration plant at
 Fort Sill.

S. C., Charleston.—Board of Public Works
 will increase daily water supply from 7-
 000,000 to 12,000,000 gals.; secure water
 from auxiliary source.

S. C., Columbia.—City will erect brick
 building costing \$3500 to house auxiliary
 pumping plant; Columbia Concrete Co.
 has contract; install electrically-operated
 pumps; Fred. C. Wyse, Engr.-Supt., Colum-
 bia.

S. C., Greenville.—City voted \$800,000 bonds
 to purchase Paris Mountain Water Co.'s
 plant and \$300,000 additional for enlargement
 and improvement. Address The Mayor.
 (Lately noted to vote.)

Tex., Houston.—City let contract Layne &
 Bowler Co., Houston, to drill artesian well
 to provide for furnishing 3,000,000 gals. water
 daily to Camp Logan.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Va., Petersburg.—City plans improvements to water-works costing \$90,000, to furnish additional supply to Camp Lee; John E. Harreck, Chrmn. Water Committee.

WOODWORKING PLANTS

Ark., Newport.—Staves.—Hocking Stave Co. will rebuild mill reported burned at \$5000 loss.

Ark., Paragould.—Staves.—Henry Wrape Co. has plans and specifications for \$50,000 plant; brick construction; concrete floors; shower baths. (Lately noted to rebuild burned plant.)

Ark., Pine Bluff.—Turner Bedding Factory, 3d and Locust Sts., will rebuild excelsior plant reported burned at loss of \$5000.

Ky., Lexington.—Hogsheads.—Lexington Tobacco Hogshead Co. increased capital from \$10,000 to \$20,000.

Miss., Jackson.—Cooperage.—Chess & Wyndom Co., Louisville, Ky., let contract for 2 dry kilns to Moore Dry Kiln Co., Jacksonville, Fla.

Mo., Kansas City.—Cabinets.—Whitcomb Cabinet Co. will erect plant; 1 story and basement; 215x250 ft.

Mo., St. Louis.—Cooperage.—Bolz Cooperage Co. inctpd. by P. J. Bolz and others; capital \$475,000.

FIRE DAMAGE

Ala., Russellville.—Hotel and canning factory, owned by Dr. W. P. Hughes; loss \$3500.

Ala., Jackson.—C. W. Zimmerman's saw mill; loss \$50,000.

Ark., Arkadelphia.—Milliken-James Hardwood Lumber Co.'s barn.

Ark., Camden.—G. W. Newton's tenant-house.

Ark., Camden.—Rumph & Tyson's residence.

Ark., Camden.—A. J. Jordan's residence, owned by St. John's Episcopal Church. Address The Rector.

Ark., Earle.—J. R. Clark's barber shop and pool hall; Crittenden Drug Co.'s store; loss \$12,000.

Ark., Earle.—Sheals & Company's store; loss \$2500.

Ark., Little Rock.—Henry Topf's 5 dwellings.

Ark., Leslie.—Greecor-Putnam Lumber Co.'s plant; Acorn Theater; total loss \$10,000.

Ark., Pine Bluff.—Turner Bedding Co.'s factory; loss \$50,000.

Ark., Newport.—Hocking Stave Co.'s mill; loss \$5000.

Ark., Pine Bluff.—Turner Bedding Factory's excelsior plant at 3d and Locust Sts.; loss \$5000.

Ark., Siloam Springs.—Mrs. Susie Powell's residence on Flint Creek; loss \$3000.

Fla., Tampa.—W. A. Dykeman's residence, near Ballast Point; loss \$7000.

Ga., Albany.—Gray Sales Co.'s automobile salesroom, owned by Farkas Estate; loss \$15,000.

Ga., Augusta.—Hulse Steam Laundry Co.'s plant at 1975 Ellis St.; loss \$35,000.

Ga., Augusta.—Holsey Hall at Paine College; loss \$5000; Dr. A. D. Betts, principal.

Ga., Fortson.—Clement Reese's residence, owned by C. M. Neal; loss several thousand dollars.

Ga., Rebecca.—Dr. W. J. Dickson's residence.

Ga., Rome.—Gordon L. Hight's garage; loss on building \$5000.

Ky., Pembroke.—W. B. Kennedy's tobacco stemmery; loss \$75,000.

Ky., Richmond.—Dixie Laundry; loss \$25,000; Geo. W. Goodloe, Prop.

Ky., Scottsville.—Landrum & McMurry's market; Wilson & Jackson's store; R. E. Wilson & Co.'s store; loss \$60,000 to \$75,000.

Md., Cambridge.—Wm. J. Holland's barn and outbuildings, 3 mi. from Cambridge; loss \$5000.

Md., Ellicott City.—Mrs. Elizabeth Baldwin's bungalow on Patapsco Heights; loss \$10,000.

Md., Monkton.—G. A. Given's barn; loss \$8000.

Mo., Holden.—I. Starkey's lumber yard; Holden Electric Light Co.'s plant; City Hall; total loss \$37,000.

Mo., Lamar.—Thos. Egger's flour mill.

Okla., Boynton.—Davis Brothers' pool hall and restaurant; loss \$2000.

S. C., Anderson.—Walter Hayes' residence, near Anderson; loss \$5000.

S. C., Clinton.—Dormitory at Thornwell Orphanage; loss \$3000.

S. C., Laurens.—Reedy River Power Co.'s ginhouse at Boyd's Mill plant.

S. C., Newtonville.—Rockingham R. R. Co.'s depot; J. L. Hawley, Gen. Mgr., Rockingham, N. C.

S. C., Starr.—W. L. Hayes' residence; loss \$6000.

Tenn., Collierville.—J. M. Glenn's barn; loss \$5000.

Tenn., Munford.—W. H. Turnage's storehouse; Cumberland Telephone Co.'s exchange; block of buildings owned by W. W. Crigger; loss several thousand dollars.

Tex., Austin.—Sam Baum's junk warehouse; loss \$25,000.

Tex., Barnhart.—Barnhart Supply Co.'s store; loss \$5000.

Tex., Bay City.—A. H. Wadsworth's rice warehouse at Old Wadsworth; loss \$2000.

Tex., Center.—Metz Mfg. Co.'s plant.

Tex., Denton.—L. M. Atcheson's residence; loss \$2000.

Tex., El Paso.—El Paso Printing Co.'s plant; loss \$10,000.

Tex., Fort Worth.—Harry Hoag's residence at 3341 Jennings Ave.; loss \$5000.

Tex., Hemphill.—J. E. King Lumber Co.'s plant.

Tex., Lockhart.—Connelly Hotel; Masur Hardware Co.'s shed; J. F. Stroud's blacksmith shop; Catholic Church and parsonage (address The Pastor); Mrs. E. Hanson's residence; Mrs. Van B. Flowers' dwelling; Alamo Lumber Co.'s building; loss \$100,000.

Tex., Orange.—Orange Maritime Corporation's shipbuilding plant; loss \$1000.

Tex., Snyder.—Mrs. J. W. Bales' residence; loss \$5000.

Tex., Trinity.—Rock Creek Lumber Co.'s feedhouse; loss \$5000.

W. Va., Beckley.—Dearing & Short's store; loss \$7000 to \$8000.

COLLAPSED

Tenn., Nashville.—Nashville Burley Tobacco Co.'s warehouse, owned by Dr. W. W. Page, 601 Third Ave. N.

WRECKED BY EXPLOSION

Miss., Meridian.—Mississippi Fiber Co.'s plant; loss \$5000.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

D. C., Washington.—Bureau of Industrial Housing, United States Dept. of Labor, O. M. Eldlitz, Director, Washington, has plans by York & Sawyer, New York, for fourteen 3-story apartment houses. (See Dwellings.)

Fla., Miami.—Wm. Harrison will erect apartment-house; cost \$12,000.

Fla., Miami.—C. C. Rawls acquired 2½-story residence on 8th St. between Avenues B and C and will remodel for apartments.

Fla., St. Cloud.—H. A. Haymaker will erect business building; apartments and offices on second floor. (See Stores.)

Ga., Atlanta.—W. E. Chambers, 237 E. Georgia Ave., has plans by H. K. Chapman, Candler Bldg., Atlanta, for apartment-house; 2 stories; 2 suites; wood; flat composition roof; wood floors; cost \$3000; day labor. (Lately noted.)

Ga., Brunswick.—American Home Corporation inctpd. with \$50,000 capital by J. E. Lambright and others; will erect apartment-houses, etc. (See Dwellings.)

Mo., St. Louis.—J. W. McCarthy will erect 3-story tenement-house; cost \$50,000.

ASSOCIATION AND FRATERNAL

D. C., Washington.—National War Work Council, Y. W. C. A., Gertrude Mayo, 660 Lexington Ave., New York, will erect administration building at 13th and I Sts. N. W.; 6 to 8 stories; cost \$800,000. (Previously noted.)

D. C., Washington.—Young Men's Christian Assn., Wm. Knowles Cooper, Gen. Secy., 1732-44 G St. N. W., will erect dormitory in Liberty Hut; accommodate 500 beds; C. B. A. Bryant in charge.

D. C., Washington.—National War Work Council, Young Women's Assn., Gertrude Mayo, Special Supervisor, 660 Lexington Ave., New York, will erect Transient Women's Hotel at North Capitol and E Sts.

Fla., Miami.—A. F. & A. M. acquired site in Fort Dallas Park, 75x240 ft., and will erect building; cost \$50,000; completion by December.

Ga., Augusta.—Knights of Columbus will erect additional building at Camp Hancock; seating capacity 4000; open-air porches; airdome will adjoin front porch; will install motion-picture machine, etc.

Ky., West Point.—National War Works Council, Y. M. C. A., will probably erect 12 or more huts in connection with West Point Camp. (See Government and State.)

S. C., Charleston.—Young Women's Christian Assn., Leland Moore, Chrmn., has plans by David B. Hyer, Charleston, for administration and recreation building; 2 stories; brick; on first floor will be conservatory, 28x9.9 ft., paved with quarry tile; lobby, 26x19.3 ft., also tiled; reading-room, 25x25 ft.; cafeteria, kitchen and porch, tiled; swimming pool, 29x40 ft., varying from 4 to 8 ft.; on second floor, assembly hall and gymnasium, 62x34.9 ft.; clubrooms, kitchenette, etc.; provide driveway; install electric

fans throughout building, etc.; cost \$68,000. (Lately noted.)

Tex., Beaumont.—Y. W. C. A. plans to erect building on Calder Ave.

Tex., Fort Worth.—Young Women's Christian Assn. plans to erect girls' camp at Lake Worth; Charlotte Clayton, Chrmn. of Committee.

Tex., Cundliff.—A. F. & A. M. will erect lodgerooms on second story of school building. (See Contracts Awarded—Schools.)

BANK AND OFFICE

Ala., Florence.—First National Bank has plans by R. H. Hunt, James Bldg., Chattanooga, Tenn., for building; gray brick; terra cotta trim; tile roof; tile and wood floors; cost \$75,000; bids opened about August 1. Address N. C. Elting, Florence. (Lately noted.)

Ala., Mobile.—Friedstein & Co., 53 Jackson Blvd., Chicago, prepared plans for building at St. Francis and St. Joseph Sts., and receive bids until August 1; 1 story and basement; cost \$150,000.

Fla., St. Cloud.—H. A. Haymaker will erect business building; offices and apartments on second floor. (See Stores.)

Ga., Moultrie.—Commercial Investment Co. has plans by A. Ten Eyck Brown, Forsyth Bldg., Atlanta, for rebuilding bank, store and office building; common brick; construction; composition roof; wood floors; low-pressure steam heat; cost, including mechanical work, \$50,000; remodel elevator, including new car, \$1700; construction under superintendent employed by owner. Address W. H. Barber, Chrmn., Moultrie. (Previously noted.)

Mo., Kansas City.—Federal Reserve Bank, J. Z. Miller, Jr., Governor, will not at this time erect building. (Lately reported to erect \$750,000 building.)

N. C., High Point.—Commercial National Bank will remodel building to provide enlarged quarters; vaults, fixtures, vault doors, tile work, safety deposit facilities, etc.; Chas. C. Hook, Archt., Charlotte, N. C.

Okla., Garber.—Farmers' State Bank will erect addition to building; brick; 1 story; 25x30 ft.; new vault and vault door; cost \$3000; R. W. Shaw, Archt., Enid, Okla.

Tex., Somerville.—Gulf, Colorado & Santa Fe Ry., F. Merritt, Chief Engr., Galveston, has plans by W. J. Smith, Galveston, for remodeling and erecting addition to office building. (See Railway Stations, Sheds, etc.)

Tex., Gonzales.—Farmers' National Bank will remodel bank and install new fixtures.

CHURCHES

Ala., Montgomery.—Hillard's Chapel will erect frame church building; cost \$2000. Address The Pastor.

Ark., Keok.—Methodist Church will erect building; 32x48 ft.; interlocking tile; shingle roof; elevated pine floors; cost \$2500; bids opened; W. N. Morris, Chrmn. Building Committee. (Lately noted.)

Ark., Pine Bluff.—Christian Science Church will erect building. Address The Reader.

Fla., Eustis.—Church of Christ will erect manse; bungalow type. Address The Pastor.

Ga., Adrian.—Baptist Church will erect building; brick; cost \$18,000. Address The Pastor.

La., Jennings.—Our Lady Help of Christian Catholic Church deferred erection of building; Favrot & Livaudais, Archts., Title Guarantee Bldg., New Orleans, La. (Previously noted.)

Md., Hamilton.—St. Dominic's Catholic Church, Rev. J. B. Manley, Pastor, will erect school and hall; cost about \$50,000.

Mo., Kansas City.—Church of Visitation, Rev. T. B. McDonald, Pastor, will erect parish-house; 2 stories and basement; 30x40 ft.; day labor.

Mo., St. Louis.—All Saints' Church, Rev. Father Joseph McMahon, Pastor, will erect 3-story Sunday-school building; 6 rooms with seating capacity of 400; cost \$40,000. (Previously noted.)

N. C., Badin.—Presbyterian Church will erect building; brick; cost \$15,000 to \$20,000. Address The Pastor.

N. C., Whiteville.—Methodist Church, Rev. J. H. Frizzelle, Pastor, has plans by H. A. Bonitz, Wilmington, N. C., for remodeling church building; cost \$4500.

Okla., Blackwell.—Roman Catholic Church, Rev. H. Kicks, Pastor, has plans by W. I. McAttee, Arkansas City, Kan., for building; 1 story and part basement; 38x104 ft.; brick; composition roof; cost \$25,000. (Previously noted.)

Okla., Bliss.—Church of Christ is having plans prepared by R. W. Shaw, Enid, Okla., for building; 1 story and basement; frame; 42x42 ft.; cost \$4500; owner taking bids.

Okla., Jenks.—Baptist Church has plans by C. E. Cannady, Tulsa, for building; brick veneer; cost \$5000. (Previously noted.)

Tex., Arlington.—Methodist Church will erect building. Address The Pastor.

Tex., Sherman.—Houston Street Christian Church receives bids through Wm. Tolbert, Secy. Building Committee, until July 18 to erect concrete, brick, steel and wood building; plans and specifications at office Wm. Albert Tackett, Archt., Sherman, and Mr. Tolbert as above.

Va., Colosse.—Colosse Baptist Church is definitely postponed erection of building; 21x70 ft.; 2 stories; brick; composition roof; wood floors; steam heat; cost \$6000; Herbert L. Cain, Archt., Richmond. (Lately noted.)

Va., Rocky Mount.—Christian Church has plans by G. R. Ragan, Roanoke, Va., for \$10,000 building.

CITY AND COUNTY

La., Monroe.—Barn.—City rejected all bids to erect mule barn; 40x90 ft.; cost about \$30,000; H. D. Appgar, Mayor. (Previously noted.)

Md., Baltimore.—Camel-house.—Park Commissioners, Druid Hill Park, will erect camel-house to replace structure previously noted damaged by fire.

N. C., Belmont.—Town Hall.—Town Council is having plans prepared by Chas. C. Hook, Charlotte, N. C., for town hall to contain town offices, 2 fireproof vaults, lockup with steel cells, assembly hall, auto fire department and steam-heating plant; part reinforced concrete; composition roof; J. B. Hall, Mayor.

Tex., Port Arthur.—Market-house.—City, previously noted contemplating erecting market-house, does not contemplate erecting structure at this time; R. L. Drake, Commr. of Public Property and Improvement.

DWELLINGS

Ala., Montgomery.—J. D. Carter will erect dwelling to replace structure lately noted damaged by fire at loss of \$3000.

Ark., Hamburg.—D. E. Watson will erect \$6000 residence.

Ark., Little Rock.—S. M. Apple will erect 1-story frame cottage; cost \$2800.

Ala., Sheffield.—Bureau of Industrial Housing, United States Dept. of Labor, O. M. Eldlitz, Director, Mills Bldg., Washington, D. C., is considering erecting 200 dwellings for Government employes.

Ark., Glenwood.—Jno. A. Mahony will erect bungalow; rustic type.

D. C., Washington.—Bureau of Industrial Housing, United States Dept. of Labor, O. M. Eldlitz, Director, Mills Bldg., Washington, has plans by Waddy B. Wood, 816 Connecticut Ave., Washington, for frame dormitories. (Lately noted.)

July 11, 1918.]

D. C., Washington.—Dr. S. B. Pole, 103 Wardman Courts, will erect dwelling at 327 5th St. N. E.

D. C., Washington.—Bureau of Industrial Housing, United States Dept. of Labor, O. M. Eidlitz, Director, Mills Bldg., Washington, has plans by York & Sawyer, 50 E. 41st St., New York, for 200 brick dwellings and fourteen 3-story apartments. (Lately noted.)

D. C., Washington.—J. B. Higdon, 2606 Bladenburg Road N. E., has plans by W. Brashers for bungalow, 29 Carleton Ave. N. E.; cost \$3000; construction by owner.

D. C., Washington.—J. B. Thomas has plans by Geo. T. Santmyers, 921½ New York Ave. N. W., Washington, for dwelling, 2909 Blithenhouse St.; cost \$8000.

D. C., Washington.—D. J. Dunnigan, 203 Bond Bldg., has plans by Geo. T. Santmyers, 921½ New York Ave. N. W., Washington, for three 3-story brick dwellings, 2312-16 20th St. N. W.; cost \$22,500; construction by owner.

D. C., Washington.—Guaranty Trust Co., owners of Chevy Chase Park property, will erect number dwellings.

Fla., Fruitland Park.—Wm. T. Woodburn, Boston, Mass., will erect residence.

Fla., Miami.—F. W. Haskell will erect 2000 residence.

Fla., Miami.—M. J. Roughan will erect residence and garage; cost \$2500.

Fla., Miami.—Eugene Stahl, Sales Agent for South Florida Farms Co., will erect bungalow.

Fla., Pensacola.—Max L. Bear has plans by W. C. Frederic, Pensacola, for 2 bungalows; cost \$6000.

Fla., Pensacola.—United States Shipping Board, Emergency Fleet Corporation, J. Rogers Flannery, Director of Housing, 1319 F St., Washington, D. C., will build 400 dwellings in Maxent tract to house shipbuilders. (See Government and State.)

Fla., Jacksonville.—N. Z. Butterwick will erect frame residence and garage; cost \$2850.

Fla., Miami.—Jas. C. Warr of Briggs & Warr purchased dwelling at 1317 Avenue C and will improve property.

Fla., St. Petersburg.—F. W. Burch, 227 Arlington Terrace, will erect residence; 30x44 ft.; 1 story and small basement; frame; brick foundation; asphalt shingle roof; double floors with yellow pine finish; pipeless hot-air furnace; city electric lights; independent water supply system pumped from drive well to pressure tank by electric motor; cost \$3000; plans nad construction by owner. (Lately noted.)

Ga., Atlanta.—Jas. O. Wynn will erect 2-story stucco dwelling; cost \$6750.

Ga., Augusta.—E. S. McKinley will erect residence; 2 stories; brick and hollow tile; cost \$6000; day labor.

Ga., Atlanta.—F. M. Gavan will erect dwelling; cost \$4750.

Ga., Atlanta.—W. D. Beatie, 207 Trust Company of Georgia Bldg., has plans by C. E. Frazier, Candler Bldg., Atlanta, for dwelling 6 rooms and bath; brick veneer; asphalt shingle roof; oak and pine finish floors; Moncrief hot-air furnace; city lighting; cost \$4500; day labor. (Lately noted.)

Ga., Brunswick.—American Home Corporation, with \$50,000 capital by J. E. Lambright, Mike Brown, Paul Morton and others; will erect residences, apartment-houses, hotels, etc.

Ga., Brunswick.—Mrs. Julius May is reported to erect 20 residences.

Ga., Atlanta.—E. P. Crenshaw will erect residence; brick veneer; tar shingle composition roof; hardwood floors; hot-air furnace heat; cost \$4000. (Lately noted.)

La., New Orleans.—F. W. Rennecke will erect cottages; cost \$2400.

La., New Orleans.—Frank Tramento will erect double cottage; cost \$2100.

La., New Orleans.—S. M. Vacaro will erect residence; frame; cost \$4000.

La., New Orleans.—F. Demorelle will erect frame bungalow; cost \$2000.

La., New Orleans.—Vito Sartino will erect double cottage; cost \$2575.

La., New Orleans.—A. S. Smith will erect duplex dwelling; cost \$4000.

Md., Baltimore.—Geo. R. Morris, 533-45 Title Bldg., is reported to erect 10 frame cottages on Ashburton St., near Garrison Ave.

Miss., Cleveland.—May Bros., Memphis, Tenn., are reported to erect 80 dwellings for tenants near Cleveland.

Mo., Kansas City.—Mary Rose McDonnell, 708 S. 11th St., St. Joseph, Mo., will erect 2 duplex residences; 2 stories and basement;

24x42 ft.; frame; shingle roof; cost \$6000 each.

Mo., Kansas City.—L. L. Derr, 2111 Prospect Ave., will erect 2 residences; 2 stories and basement; 34x35 ft.; stucco; shingle roof; cost \$4000 each.

Mo., Kansas City.—C. A. Price will erect residence; 2 stories and basement; 22x26 ft.; frame; shingle roof; cost \$3500; construction by owner.

Mo., Kansas City.—Geo. G. Wright will erect bungalow; brick, stone and hollow tile; 1 story and basement; 75x75 ft.; cost \$20,000; Wight & Wight, Architects, First Natl. Bank Bldg., Kansas City; Heating Engr., W. E. Gillham, Inter-State Bldg., Kansas City.

Mo., St. Louis.—Gustav Getz will erect 2-story dwelling at 3314 Russell Ave.; cost \$9000.

N. C., Charlotte.—Charlotte Consolidated Construction Co. will erect residences at 805 Worthington Ave. and 2100 Avondale Ave.; cost \$2000 and \$2600, respectively.

N. C., Charlotte.—Earl Whitton will erect 2-story residence; cost \$6000.

N. C., Charlotte.—Luke Seawell will erect residence in Dilworth addition.

N. C., Wilson.—Wilson Cotton Mills will erect number tenements. (See Miscellaneous Structures.)

Okla., Enid.—John Rush is having plans prepared by R. W. Shaw, Enid, for residence; 28x44 ft.; oak and pine trim floors; hot-air heat; electric lights; cost \$5500.

Okla., Blackwell.—Miss Valentine Blackwell will erect residence; 1 story and basement; 32x56 ft.; stucco construction; cost \$7500; W. L. McAttee, Archt., Arkansas City, Kan.

Okla., Enid.—Chas. H. Jahn is having plans prepared by R. W. Shaw, Enid, for residence; 30x44 ft.; brick veneer; oak and pine trim floors; hot-air heat; electric lights; cost \$7000.

Okla., Enid.—H. H. Anderson has plans by R. W. Shaw, Enid, for residence; 2 stories and basement; mat faced brick veneer; 32x46 ft.; oak floors and trim; composition shingle roof; cost \$12,000.

Okla., Enid.—C. E. Ford will erect residence; frame; cost \$4000.

Okla., Enid.—E. H. Howell will erect 2 dwellings; cost \$2000 and \$3000, respectively.

Okla., Oklahoma City.—Nichols & Chandler will erect residence; 2 stories; brick veneer; cost \$10,000.

Okla., Oklahoma City.—C. E. Huffman will erect residence on West 28th St.; 2 stories; frame; cost \$7800.

Okla., Oklahoma City.—Aurelius Swanson Co. will erect 2-story frame residence on West 17th St.; cost \$5000.

Okla., Oklahoma City.—C. W. Lucas will erect residence; 2 stories; cost \$4500.

Okla., Oklahoma City.—A. R. Nelson will erect residence; frame; cost \$4000.

S. C., Buffalo.—Union Buffalo Mills will improve mill village; E. L. Draper, Archt., Charlotte, N. C.

S. C., Greenville.—Skelton & Owens will erect dwelling; cost \$4500.

S. C., Greenville.—T. J. Goodlett will erect dwelling; cost \$2500.

S. C., Greenville.—S. P. Stover will erect dwelling; cost \$2800.

Tex., Beaumont.—F. S. Marble will erect residence; 1 story; 7 rooms; hollow tile and brick; cost \$3000.

Tex., Beaumont.—H. Craig will erect 2 frame dwellings; cost \$4000.

Tex., Dallas.—W. L. Burnett will erect 5-room residence; cost \$2500.

Tex., Fort Worth.—R. C. Maxwell will erect 2000 frame residence.

Tex., Fort Worth.—R. C. Randall will erect 4000 frame residence.

Tex., Fort Worth.—G. C. Cooley will build 3000 frame residence.

Tex., Fort Worth.—Rhodes & Mantz will erect 3 brick-veneer residences; cost \$29,100.

Tex., Fort Worth.—I. C. Woody will erect 2 frame dwellings; cost \$3000.

Tex., Fort Worth.—L. Cohen will expend \$4500 to repair residence.

Tex., Fort Worth.—J. L. Miller will erect 5 frame dwellings; cost \$4000 each.

Tex., Fort Worth.—J. J. Ray will erect 2 frame residences; cost \$4000.

Tex., Fort Worth.—I. Miller will erect residence; brick veneer; cost \$5000.

Tex., Fort Worth.—M. Rector will erect 2 frame residences; cost \$2000 each.

Tex., Houston.—Allen Sanford will erect 6-room frame residence; cost \$2500.

Tex., San Antonio.—Dr. G. P. Robertson will erect 8-room dwelling; cost \$6500.

Tex., San Antonio.—Mrs. E. F. Bailey will erect residence; 6 rooms; cost \$3000.

Tex., San Antonio.—J. E. Collins will erect 6-room dwelling; cost \$3000.

Tex., San Antonio.—M. Bonebrake will erect 5-room dwelling; cost \$2000.

Tex., San Antonio.—Arthur Scherer will erect dwelling; 6 rooms; cost \$3400.

Tex., San Antonio.—Otto Rosen will erect 2 dwellings; cost \$3400.

Tex., San Antonio.—E. Guildberg will erect two 5-room dwellings; cost \$4200.

Tex., San Antonio.—W. H. Grothaus will erect 7-room residence; cost \$6500.

Tex., Somerville.—Gulf, Colorado & Santa Fe Ry., F. Merritt, Chief Engr., Galveston, has plans by W. J. Smith, Galveston, for 2 dwellings. (See Railway Stations, Sheds, etc.)

Tex., Waco.—C. O. Miller will erect residence; cost \$6900.

W. Va., Coopers.—Mill Creek & Coke Co. will erect 2 dwellings; plans to erect 8 more structures later.

GOVERNMENT AND STATE

Ala., Sheffield.—Dwellings.—Bureau of Industrial Housing, United States Dept. of Labor, O. M. Eidlitz, Director, Washington, D. C., is considering erecting dwellings for Government employes. (See Dwellings.)

D. C., Anacostia.—Dispensary.—Bureau of Yards and Docks, Navy Dept., C. W. Parks, Chief, Washington, will build dispensary; cost \$2500. (See Hospitals.)

D. C., Washington.—Y. W. C. A.—National War Work Council, Young Women's Assn., will erect Transient Women's Hotel. (See Association and Fraternal.)

D. C., Washington.—Buildings and Walks.—Bureau of Yards and Docks, Navy Dept., C. W. Parks, Washington, D. C., will construct walks and erect buildings at Fort Lafayette.

D. C., Washington.—Dwellings, etc.—Bureau of Industrial Housing, United States Dept. of Labor, O. M. Eidlitz, Director, Washington, has plans by York & Sawyer, New York, for 200 dwellings and fourteen 3-story apartments. (See Dwellings.)

D. C., Washington.—Dormitories.—Bureau of Industrial Housing, United States Dept. of Labor, O. M. Eidlitz, Director, Washington, has plans by Waddy B. Wood, Washington, for frame dormitories. (See Dwellings.)

D. C., Washington.—Y. W. C. A.—National War Work Council, Y. W. C. A., Gertrude Mayo, 660 Lexington Ave., New York, will erect administration building at 13th and I Sts. N. W. (See Association and Fraternal.)

Fla., Pensacola.—Dwellings.—United States Shipping Board, Emergency Fleet Corporation, J. Rogers Flannery, Director of Housing, 1319 F St., Washington, D. C., will build 400 dwellings in Maxent tract to house shipbuilders; cost about \$500,000; city will provide sewers, water, hard-surfaced streets, etc.; estimated cost \$100,000; will probably vote on bonds.

Fla., Key West.—Hospital.—Bureau of Yards and Docks, Navy Dept., C. W. Parks, Chief, Washington, D. C., is receiving bids to repair marine hospital. (See Hospitals.)

Ga., Atlanta.—Camp Improvements.—War Department, Washington, D. C., will enlarge Camp Gordon to accommodate 3000 to 4000 additional troops.

Ga., Atlanta.—Camp Improvements.—War Department, Washington, D. C., will erect gymnasium and swimming pool for Mechanical Repair Unit 305 at Camp Jesup; cost \$20,000.

Ga., Augusta.—Knights of Columbus.—Knights of Columbus will erect additional building at Camp Hancock. (See Association and Fraternal.)

Ky., Louisville.—Cantonment.—War Dept., Washington, will improve Camp Zachary Taylor; erect administrative offices, stables, etc.

Ky., West Point.—Camp.—War Dept., Washington, will construct cantonment to ultimately accommodate 53,000 troops; cost \$8,000,000 to \$10,000,000; Maj. H. A. Gilbert will probably be in charge of construction; National War Works Council, Y. M. C. A., New York, will also probably erect 12 or more huts; Major Gilbert to supervise erection of kitchen, bathhouses, etc., for immediate needs.

Md., St. Helena.—School.—United States Shipping Board, J. Rogers Flannery, Director of Housing, Washington, D. C., is reported having plans prepared by Smith & May, 1133 Calvert Bldg., Baltimore, for public school. (See Schools.)

N. C., Azalea.—Hospital.—War Department, Washington, D. C., is considering enlarging tuberculosis sanitarium under construction to double capacity. (See Hospitals.)

S. C., Spartanburg.—Nurses' Quarters.—War Dept., Washington, D. C., will erect 4 additional buildings for nurses' quarters at Camp Wadsworth; 80x120 ft.; Capt. J. D. Koop, Constructing Quartermaster, Camp Wadsworth.

Tex., El Paso.—Warehouse.—G. P. Putman has permit to erect warehouse to be used by quartermaster's department; cost \$15,000.

Va., Camp Humphreys.—Barracks.—Cantonment Division, War Dept., Washington, D. C., will erect additional barracks; construction by day labor under supervision of Maj. H. E. Kebbon, Construction Quartermaster, Camp Humphreys.

HOSPITALS, SANITARiums, ETC.

Ala., Florida.—Lakeview Hospital of Florida Incptd. with \$30,000 capital by W. S. Marlan, M. A. George, J. T. Hughes and others.

D. C., Anacostia.—Bureau of Yards and Docks, Navy Dept., Washington, C. W. Parks, Chief, will expend \$2500 to build dispensary.

Fla., Key West.—Bureau of Yards and Docks, Navy Dept., C. W. Parks, Chief, Washington, D. C., is receiving bids to repair marine hospital; cost \$2000.

Md., Camp Meade.—Cantonment Division, War Department, Washington, D. C., will enlarge base hospital, etc. (See Government and State.)

N. C., Azalea.—War Department, Washington, D. C., is considering enlarging tuberculosis sanitarium under construction to double capacity; ultimate cost about \$3,000,000; Gude & Co., Atlanta, contractors of present project will probably have contract for addition.

Okla., Shawnee.—City will vote on \$65,000 bonds to erect additions to municipal hospital. Address The Mayor.

Tenn., St. Elmo.—Dr. C. P. Knight, in charge of United States public health service in Chattanooga, is interested in erection of hospital at Florence Crittendon Home; cost about \$10,000.

Va., Roanoke.—City has plans by H. M. Miller, 3½ Campbell Ave., Roanoke, for nurses' home at City Hospital; brick; cost \$12,000.

HOTELS

Ala., Birmingham.—Hillman Hotel Co. will expend \$10,000 to \$15,000 to alter hotel; install front with storeroom on each side, improve heating system, alter cold-storage plant, etc.

D. C., Washington.—National War Work Council, Young Women's Assn., will erect Transient Women's Hotel. (See Association and Fraternal.)

Fla., Lake Worth.—Lake Worth Development Co., temporarily abandoned plans for erection of hotel; 3 stories; 300x400 ft.; steel and wood; concrete foundation; fire-resisting roof; wood and flexible floors; 3 elevators; steam heat; cost \$250,000; Geo. E. Strout, Archt., Lake Worth. (Previously noted.)

Fla., Wauchula.—Frank H. Simmons leased 3-story brick building on 5th Ave. and will remodel for hotel; also leased old Wauchula House and will repair for use in connection with hotel.

Ga., Brunswick.—American Home Corporation Incptd. by J. E. Lambright and others; will erect hotels, etc. (See Dwellings.)

N. C., Greensboro.—Vick Chemical Co. plans to erect hotel; 9 stories; fireproof; 150 rooms; cost about \$200,000; details not determined. (L. Richardson & Son lately noted to erect hotel.)

N. C., Wilmington.—T. A. Green will erect 4 additional stories to Hotel Wilmington.

Okla., Jenks.—Church & Upton will erect hotel building.

Tex., Houston.—Rice Hotel Co. will expend \$4000 to repair hotel.

MISCELLANEOUS

Ark., Conway.—Shed.—Conway Compress Co. will erect shed and make other improvements; cost \$40,000.

Fla., Long Key.—Clubhouse.—St. Petersburg Tarpon Club, St. Petersburg, is considering erecting clubhouse at gulf resort to be established; cost \$4000.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Mo., St. Louis—Stable.—American Railroad Express Co. will expend \$2500 to repair stable.

Mo., St. Louis—Transfer Station.—Fidelity Transfer Co. has plans by Jos. A. Stiffelman, 5749 Kingsbury St., St. Louis, for freight transfer station; "L" shape 120x24 ft. and 100x24 ft.; frame; composition roof; wood floors; cost \$7500; vitrified brick paving, \$800; construction by owner.

N. C., Wilson—Community Building, etc.—Wilson Cotton Mills will erect community building for employees; also erect number tenements and install drinking fountains at mill.

Okla., Ada—Fair.—Fair Association will reconstruct buildings; cost \$3000.

Va., Norfolk.—Lutheran Brotherhood purchased Rochambeau Apartments and will remodel for service club; first floor for lobby, gameroom, reading-room, etc.; upper stories for dormitories to accommodate about 100; Rev. J. M. MacCauley, Pastor of First Church of Norfolk, is interested.

RAILWAY STATIONS, SHEDS, ETC.

Ga., Jeffersonville.—Macon, Dublin & Savannah R. R., J. A. Streyer, Mgr., Macon, will remodel warehouse for passenger station; brick; concrete floors and platforms; P. E. Dennis, Archt., Citizens' & Southern Bank Bldg., Macon.

Mo., Kansas City.—Chicago & Alton R. R., H. T. Douglas, Ch. Engr., Chicago, Ill., will erect freighthouse; 520x36 ft.; slate roof supported by timber trusses for distance of 300 ft.; second story for offices.

Okla., Tulsa.—Oklahoma Union Ry. Co. will erect car barn at 700 S. Maybell St.; cost \$25,000.

Tex., Somerville.—Gulf, Colorado & Santa Fe Ry., F. Merritt, Chief Engr., Galveston, has plans by W. J. Smith, Galveston, for remodeling and erecting 1-story and staircase addition to office building; electric lights; plumbing and heating; mill construction; for 2 frame dwellings; mill construction; shingle roof; brick chimneys; plumbing and electric wiring; also to erect power-house; brick; tar and gravel roof; metal gutters.

W. Va., Beckley.—Chesapeake & Ohio Ry. Co., P. I. Cabell, Chief Engr., Richmond, Va., will erect passenger station; brick and concrete; 24x54 ft.; 2 stories; cost \$12,000; will remodel present passenger station for freight station; also plans additional sidetracks. (Lately noted.)

SCHOOLS

Ark., Hope.—School Board will erect First Ward school; J. A. Sullivan, Dorsey McRae and J. T. Robinson, Building Committee.

Ark., Spadra.—Spadra Special School Dist. will issue \$15,000 bonds to erect school building. Address District School Trustees.

D. C., Washington.—District Commrs. rejected all bids to construct portable school buildings. (Lately noted.)

Fla., Clearwater.—Pinellas County School Board receives bids until July 15 to erect school building in Lealman School Dist.; voted \$6000 bonds; Dixie M. Hollins, Secy. of Board of Public Instruction.

Fla., Ft. Pierce.—Board of Public Instruction will erect school at Quay, make repairs to school at Gifford, Narrows and Bethel; issued \$12,000 bonds.

Fla., Quay.—Board of Public Instruction, Fort Pierce, will erect school at Quay and repairs to schools at Gifford, Narrows and Bethel. (See Fla., Fort Pierce.)

Ga., Sycamore.—City will erect addition to school; 4 rooms; brick; wood floors; cost \$6000; bids opened about August 1 and construction begins about Sept. 1. Address City Clerk. (Lately noted.)

Ga., Valdosta.—Legislature is considering \$50,000 appropriation to erect dormitory for South Georgia State Normal School.

La., Ponson.—Peavy-Wilson Lumber Co. will erect school building; 8 rooms; frame.

Md., Frostburg.—Allegheny County Board of Education, Edw. F. Webb, Secy., 7 Union St., receives bids until July 15 to erect 2-story brick addition and alterations to Benli High School; plans and specifications at office Board of Education and Chas. M. Anderson, Archt., 324 N. Charles St., Baltimore. (Previously noted.)

Md., Baltimore.—Morgan College, J. O. Spencer, Prest., has plans by Edward L. Tilton, 52 Vanderbilt Ave., New York, for building on Hillen Road; probably stone; cost \$50,000; contractors estimating are: Geo. R. Morris, 535-45 Title Bldg.; B. F. Bennett Building Co., 123 S. Howard St.; Cogswell-Koether Co., 406 Park Ave.; Chas. L.

Stockhausen Co., Marine National Bank Bldg.; all of Baltimore; Oscawana Building Co., New York, and Govanstown Construction Co. (Previously noted.)

Md., Hamilton.—St. Dominic's Catholic Church, Rev. J. B. Manley, Pastor, will erect school and hall. (See Churches.)

Md., Lonaconing.—Allegheny County Board of Education, Edw. F. Webb, Secy., 7 Union St., Frostburg, Md., receives bids until July 15 to erect 2-story brick addition to Lonaconing High School; 50x30 ft.; brick; composition roof; wood floors; cost \$32,000; plans and specifications at office Board of Education, Frostburg, and Geo. F. Sansbury, Archt., Cumberland, Md. (Lately noted.)

Md., St. Helena.—United States Shipping Board, J. Rogers Flannery, Director of Housing, 1319 F St. N. W., Washington, D. C., is reported having plans prepared by Smith & May, 1133 Calvert Bldg., Baltimore, for public school; several stories; brick; estimated cost \$300,000. (Lately noted.)

Miss., Meridian.—Tonic Consolidated School District will vote on \$3500 bonds to erect school. Address Chrmn. Board of Suprs. of Lauderdale County. (Lately noted.)

Miss., Toomsaba.—Lauderdale County School Board, Meridian, Miss., approved \$3500 bond issue to erect school building. (Lately noted.)

N. C., Sedalla.—Palmer Memorial Institute Trustees will erect school to replace structure previously noted damaged by fire; Charlotte Hawkins Brown, Principal.

Okla., Oneda.—Consolidated District No. 3, Kingfisher County, is having plans prepared by R. W. Shaw, Enld. for school building; 48x70 ft.; 2 stories; brick; plans out for bids July 8; cost \$15,000, exclusive of plumbing and heating.

Tenn., Somerville.—W. T. Loggins, County Supt. of Education, receives bids until July 11 to alter and erect addition to public school; plans and specifications at office of Mr. Loggins, Somerville, and John Gaisford, Archt., 408 Goodwyn Institute Bldg., Memphis, Tenn.

Tex., Beaumont.—Baylor Medical College will erect 6-story brick building; cost \$75,000.

Tex., El Paso.—St. Ignatius Catholic Church, 2d and Park Sts., has plans by M. L. Cardona, 14 Morgan Bldg., El Paso, for school building; 128x59x35 ft.; brick; pitch composition roof; Texas pine floors; cost \$19,000; heating, \$2500. Address architect. (Lately noted.)

Tex., Post.—Close Independent School District, L. W. Daly, Prest., Post, has plans by R. E. Gilmore, Post, Tex., for school; brick; composition roof; cost \$10,000; bids opened about July 24. Address architect. (See Machinery Wanted—Building Materials; Reinforcing Rods; Roofing; Fountain; Brick; Metal Lath; Air Registers.)

W. Va., Quinimont.—Board of Education of Quinimont District receives bids until July 30 to erect addition to school at Sevy Bridge; also receives bids until July 29 to erect 2-room school at Holly Coal Co., near Magnet; plans and specifications at office C. A. Fox, Prest. Board of Education, Crickmer, W. Va.

STORES

Ala., Birmingham.—Hillman Hotel Co. will expend \$10,000 to \$15,000 to improve hotel, install front with storeroom on each side, etc. (See Hotels.)

Fla., Key West.—San Carlos Institute will probably erect \$100,000 building; Dr. J. M. Renelo, Prest.

Fla., St. Cloud.—H. A. Haymaker will erect business building; 2 stories; brick and stone; plate-glass windows; 4 stores on first floor; offices and apartments on second floor.

Ga., Moultrie.—Commercial Investment Co. will rebuild bank, store and office building with superintendent for construction; common brick; composition roof; low pressure steam heat; cost \$50,000, including mechanical work; remodeling elevator, \$1700; A. Ten Eyck Brown, Archt., Forsyth Bldg., Atlanta. (See Bank and Office.)

Ga., Watkinsonville.—Miss Warnie Edge will erect store building on Broad St. to replace structure lately noted damaged by fire; brick or cement; stone.

Ky., Campbellsville.—Board of Education has plans by C. C. and E. A. Weber, Citizens' Bldg., Cincinnati, Ohio, for high school to contain auditorium, gymnasium, laboratories, domestic science and manual training departments; 2 stories and basement; cost \$40,000.

La., New Orleans.—Jahneke Company will erect 2-story frame building; cost \$2000.

La., New Orleans.—Dunbar Molasses & Syrup Co. will erect addition to building, 3301 Chartres St.; cost \$2640.

Md., Lanham.—Prince George's County School Board, E. S. Burroughs, Secy., Upper Marlboro, Md., has plans by Bart Tourison, 110 S. Broad St., Philadelphia, Pa., for school; 1 story; cost \$12,000.

Miss., Vinville.—Vinville School District defeated \$5500 bond issue to erect school; 2 stories; frame; 6 or 8 rooms. Address District School Trustees. (Lately noted.)

Mo., Graham.—Board of Education has plans by W. E. Schrage, 43 E. 32d St., Kansas City, for improvements to heating and plumbing systems in school; cost \$5000.

Mo., Hornersville.—Bone School District, R. H. Tinnin, Prest. Board of Trustees, receives bids until July 9 to erect 1-story brick school; 79x48 ft.; wood-shingle roof; pine floors; low-pressure heat; cost \$9000; T. E. Hyatt, Archt., Kennett, Mo.; plans and specifications at office Mr. Tinnin and Planners' Bank of Hornersville. (Lately noted to open bids June 24.)

Mo., Leston.—Board of Education has plans by Madorie & Field, Republic Bldg., Kansas City, for school building; 2 stories and basement; 40x60 ft.; brick and stone; composition roof; cost \$20,000.

Mo., St. Louis.—Christian Brothers College, Brother Edward in charge, 5370 Page Ave., is having plans prepared by Henry P. Hess, 4811 Cote Brillante Ave., St. Louis, for boiler-house in rear, gymnasium, dormitory, showers, etc.; 3 stories and basement; fireproof, brick and concrete; cost \$200,000. (Previously noted.)

Okla., Jenks.—J. W. Price will erect business building; 2 stories; concrete.

S. C., Greenville.—J. C. Gresham will erect building on Lloyd St.; estimated cost \$3000.

Tenn., Murfreesboro.—John M. Butler has plans by Chas. Ferguson, Nashville, Tenn., for 2 stores; 25x110 ft. each; brick; composition roof; double wood floors; 2 hand elevators; cost \$15,000 to \$18,000; date opening bids not set. (Lately noted.)

Tex., Houston.—Max H. Nathan will remodel and enlarge store; build double entrance, install additional show windows, etc.

Tex., San Antonio.—Mrs. J. Frost will remodel and alter building at 123 Military Plaza; cost \$7000.

Va., Climax.—School Board has plans by E. R. James, Budley Bldg., Danville, for school building; frame; 2 stories; 140x51 ft.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

D. C., Washington.—W. J. Pilling and W. G. Guss will erect apartment-house at 10th St. and Massachusetts Ave. N. W.; cost \$250,000; W. G. Guss, Archt. and Contr., 2804 14th St. N. W., Washington.

Fla., Miami.—Albert Anderson, 115 Bird Ave., will erect lately-noted apartment-house; 46x100 ft.; concrete; composition roof; heat from gas coils; cost \$30,000; plans and construction by owner. (See Machinery Wanted—Furniture.)

Ga., Atlanta.—Mrs. J. H. Clark let contract to M. G. Norris, Atlanta, to erect apartment-house; cost \$45,000.

Ga., Atlanta.—Mrs. D. H. Barr let contract to M. G. Norris, Atlanta, to erect apartment-house at 50 W. Baker St.; 3 stories; hollow tile; 60 apartments; cost \$100,000.

Md., Baltimore.—Samuel J. West has plans by J. E. Laferty, Roslyn Ave., near Beech Ave., and J. Franklin Nelker, 209 Professional Bldg., both of Baltimore, for addition to apartment-house, 2235 Mondawmin Ave.; 3 stories; brick; 14.2x30.7 ft.; cost \$2000; John F. Hardy, Contr., 4200 Groveland Ave., Baltimore.

Mo., St. Louis.—S. Schucart will alter 7 tenements; cost \$2100; Max Cohn, Contr., St. Louis.

Va., Portsmouth.—J. S. Crawford, 107 Court St., let contract to Lorenzo Carr, 617 County St., Portsmouth, to remodel 3-story residence at 209 Court St. for apartment-house; also to remodel building at 421 County St. for apartment-house; cost \$5000 and \$4000, respectively.

W. Va., Mullens.—J. A. Radman let contract to W. J. Snidom, Mullens, to erect store and apartment building; 3 stories and basement; 27x61 ft.; cost \$15,000; A. F. Wyson, Archt., Princeton; let contract to W. A. Badell, Mullens, for plumbing. (See Stores.)

Va., Richmond.—F. C. and H. Z. Elmler will repair brick store; cost \$2500.

Va., Richmond.—Thos. J. Todd Estate will repair 3 brick stores; cost \$4000.

Va., Richmond.—J. T. Wilson will repair brick store; cost \$4000.

Va., Rockymount.—Franklin County Mercantile Stores have preliminary plans by R. Ragan, Roanoke, for store building; 30x125 ft.; 3 stories; refrigerating plant in basement; passenger and freight elevators; cost \$25,000.

W. Va., Beckley.—Dearing & Short will erect store to replace structure noted damaged by fire at loss of \$7000 to \$8000.

W. Va., Huntington.—S. & D. Gideon has plans by Benj. J. Frank, 325 N. Charles St., Baltimore, Md., for store building; 2 stories and basement; 30x180 ft.; cost \$30,000.

WAREHOUSES

Ark., Hamburg.—W. L. Blank will erect warehouse; cost \$10,000.

Ky., Louisville.—Liggett & Meyers Tobacco Co. will expend \$4500 to remodel building at 21th and Main Sts.

Ky., Mt. Sterling.—Mt. Sterling Tobacco Redrying & Storage Co. receives bids through Pierce Winn, Montgomery National Bank, Mt. Sterling, until July 15 to erect tobacco factory and storage warehouse; plans and specifications at office J. P. Taylor Co., Lexington, Ky., and Mr. Winn.

Ky., Owensboro.—Equity Home Warehouse Co., Geo. M. Taylor, Secy., is considering erecting addition to warehouse.

Mo., Kansas City.—Southwestern Milling Co. will erect warehouse; 3 stories; brick, concrete and steel. (See Flour, Feed and Meal Mills.)

Mo., Kansas City.—Kewanee Boiler Co. will erect warehouse; 1 story; gravel roof; 21x36 ft.; brick; cost \$2000; construction by owner.

Mo., St. Louis.—Geo. F. Hall Real Estate Co., International Life Bldg., will erect warehouse and loft building; 4 stories and basement; 54x131 ft.; cost \$65,000; brick and stone; E. J. Hess, Archt., 3236 Magnolia St., St. Louis.

Okla., Tulsa.—Tulsa Warehouse & Distributing Co. will erect concrete warehouse at 2 N. Cheyenne St.; cost \$65,000.

Tex., El Paso.—G. P. Putman has permit to erect warehouse to be used by quarries master's department. (See Government and State.)

ASSOCIATION AND FRATERNAL

Tex., Galveston.—Knights of Columbus let contract to W. H. Janssen, Galveston, to erect building at Fort Crockett.

BANK AND OFFICE

Mo., St. Louis.—Laclede Gas Light Co. let contract to J. C. Settle, Pontiac Bldg., St. Louis, to erect addition to office building; 20x36 ft.; cost \$6000.

Okla., Braman.—Farmers' State Bank let contract to E. C. Hamler, Mulvane, Kan., to erect bank building; 1 story and basement; 25x50 ft.; cost \$5000; H. S. Coates, Archt., First National Bank Bldg., Wichita, Kan.

Va., Norfolk.—Baldwin Bros., Agts., Brook Ave., let contract to W. T. Gregory, 508 Lav Bldg., Norfolk, to erect store and office building; 80x213 ft.; 6 stories; reinforced concrete; gravel roof; Truscon joist floor construction; electric lights; cost \$250,000; steam heat, \$18,000; electric elevators, \$19,000; Nel & Thompson, Archts., Seaboard Bank Bldg., Norfolk. (Lately noted.)

Va., Petersburg.—Petersburg Savings & Insurance Co. let contract to Hoggson Bros., 485 Fifth Ave., New York, to remodel and enlarge banking quarters.

Va., Staunton.—Offices.—Augusta County let contract to George W. Fretwell, Staunton, to remodel building for offices; cost \$2500. (Lately noted.)

CHURCHES

Ga., Pelham.—Methodist Episcopal Church let contract to Smith & Watson, Albany, Ga., to erect building; 80x90 ft.; brick and stucco; slate and tin roof; wood floors; warm-air heat (not let); wiring; cost \$5000; Hentz, Reid & Adler, Archts., Atlanta. (Lately noted.)

W. Va., Weirton.—Roman Catholic Church, Rev. A. D. McSwiggan, pastor, let contract

to Jos. Romano, Burgettstown, Pa., to erect building; 1 story and balcony; 64x100 ft.; cost \$30,000.

CITY AND COUNTY

Tenn., Johnson City.—City Hall and Market-house.—City let contract to Beeler & Company, Johnson City, to erect city hall and market-house; brick; 162x88 ft.; composition roof; vapor heat; cost \$70,000; R. H. Hunt, Archt., James Bldg., Chattanooga. Address C. G. Mitchell, Associate Archt., Johnson City. (Previously noted.)

Tex., Leakey.—Real County let contract to Bruno Schot, Kerrville, Tex., to erect court-house; 48x12 ft.; sheet-iron roof; cement and lumber floor construction; cost \$13,500; H. E. Reuter, Archt., Frost Bldg., San Antonio. (Previously noted.)

DWELLINGS

D. C., Washington.—J. M. Holton has plans by Waddy B. Wood, 816 Connecticut Ave. N. W., and let contract to C. A. Langley, 210 12th St. N. W., both of Washington, to repair dwelling, 2117 S St. N. W.; cost \$400.

D. C., Washington.—Amy Gordon let contract to Gus S. Zepp, 235 Southern Bldg., Washington, to erect dwelling 3212 Oliver St. N. W.; cost \$840; Spelden & Spelden, Architects, 1403 New York Ave. N. W., Washington.

D. C., Washington.—Corby Co. has plans by Homer R. Spence for repairing dwelling on Channing St.; cost \$2500; Frank L. Wagner, Contr., 1413 H St. N. W., Washington.

Fla., St. Petersburg.—Mrs. R. J. Carey, Moore, Pa., let contract to F. W. Burch, Box 64, St. Petersburg, to erect residence; 28x38 ft.; 1 story; frame; asphalt shingle roof; sub-floors and yellow pine finish; fireplace; city lighting; independent water supply system pumped from well to pressure tank by electric motor; cost \$3000. (Lately noted.)

Ga., Atlanta.—L. D. Williams let contract to M. G. Norris, Atlanta, to erect dwelling; cost \$30,000.

Ga., Augusta.—D. M. Lyon let contract to Palmer-Spivey Construction Co., Augusta, to erect residence; cost \$10,300.

Ga., Flemington.—H. G. Stacy let contract to R. W. Boyd, to erect bungalow; wood; cost \$3500.

Ga., Savannah.—Bishop Edward W. Osborne let contract to F. McRae, Savannah, to erect bungalow; Henrik Wallin, Archt., Savannah.

La., New Orleans.—C. Geary let contract to W. M. Geary, New Orleans, to erect dwelling; frame; cost \$3400. (Lately noted.)

Mo., Kansas City.—Henry Burr, Fidelity Trust Bldg., let contract to J. C. Nichols, 910 Commerce Bldg., Kansas City, to erect residence; 2 stories; brick and siding; shingle roof.

Mo., Kansas City.—M. F. Allen will erect residence; frame and stucco; 2 stories and basement; 39x73 ft.; cost \$10,000; J. C. Nichols, Builder, Commerce Bldg., Kansas City.

Mo., Marceline.—St. N. Bigger let contract to H. D. Porter, Marceline, for masonry work for erection of addition and alterations to dwelling, and to Patent Vulcanite Roofing Co., St. Louis, for roofing; plans by Lloyd Litch, Marceline, call for 2 stories; 37x40 ft.; cost \$5000.

Mo., St. Louis.—J. Blake Realty Co., 815 Chestnut St., will erect residence; 2 stories; 24x4 ft.; cost \$4500; let contract for masonry work to J. E. Earenficht and for plumbing to H. E. Millaway, both of St. Louis.

Mo., Vandalia.—Walsh Fire Clay & Products Co., St. Louis, let contract to Moreno Burkham Construction Co., St. Louis, to erect one hundred 4-room dwellings; 29.10x34.6 ft.; hollow tile, brick and stucco; tile and composition roofs; wood floors; cost \$150,000; Walter W. Shields, Archt., St. Louis.

Okla., Oklahoma City.—G. V. McClintock will erect frame residence; cost \$3000; C. W. Welborn, Contr., Oklahoma City.

Okla., Oklahoma City.—E. Seamans will erect frame residence; cost \$3000; W. W. Conner, Contr., Oklahoma City.

Okla., Oklahoma City.—A. J. Steele let contract to J. M. Struck, Oklahoma City, to erect residence; frame; cost \$4000.

Okla., Oklahoma City.—John Garrett let contract to H. P. Smiser, 402-03 Scott Thompson Bldg., Oklahoma City, to erect residence; 36x50 ft.; frame; shingle roof; oak floors; cost \$5000. (Lately noted.)

Tex., Beaumont.—N. J. Buhman let contract to J. A. Hughes, Beaumont, to erect

frame residence; cost \$2000; C. A. Logan, Archt., Beaumont.

Tex., Beaumont.—W. A. Brown let contract to J. A. Pitts, Beaumont, to erect stucco residence on Calder Ave.; frame and stucco residences on Cartwright St., and repair residence on Magnolia Ave.; cost \$12,000.

Tex., Beaumont.—Mrs. D. Taylor let contract to J. E. Heartfield, Beaumont, to erect residence; 2 stories; 5 rooms; cost \$2500.

Tex., Beaumont.—Mr. Merritt let contract to J. E. Heartfield, Beaumont, to erect 5-room residence; cost \$2500.

Tex., Beaumont.—C. E. Bardeman let contract to Rutt Home Builders, Beaumont, to erect 5-room residence; cost \$2100.

Tex., Beaumont.—S. Kojak let contract to A. C. George, Beaumont, to erect two 5-room dwellings; cost \$3000.

Tex., Beaumont.—Dr. L. Goldstein will erect 2-story hollow-tile and stucco residence; cost \$7500; J. J. Pilgreen, Contr., Beaumont; C. A. Logan, Archt., Beaumont.

Tex., Beaumont.—T. Cuchie let contract to J. Gebbia, Beaumont, to erect residence; 5 rooms; cost \$2500.

Tex., Dallas.—J. J. Bookhout let contract to H. P. Holbrook, Dallas, to repair frame residence; cost \$5000.

Tex., Houston.—Mrs. J. P. Humphrey will erect 6-room frame residence; cost \$4500; C. K. Smith, Contr., Houston.

Tex., Houston.—H. R. Davis let contract to C. E. T. Hicks, Houston, to erect addition to residence; cost \$2746.

Tex., Houston.—Texas Lumber Co. let contract to J. M. Sims, 1809 Houston Ave., Houston, to erect residences; medium construction; bungalow type; wood shingle and slate roof; yellow pine and oak floors; city electric lights; concrete sidewalks; cost \$2,000 to \$10,000; W. S. Murdock, Archt., Houston. (Lately noted.)

Tex., Houston.—Mrs. J. Weidmeyer let contract to Collins Construction Co., Houston, to erect residence; 2 stories; stucco; cost \$10,000.

Tex., Houston.—E. F. Dupree let contract to W. Davis, Houston, to erect residence; 5 rooms; cost \$3500.

Tex., Orange.—A. Wilson let contract to Hogg & Bowles, Orange, to erect frame residence.

Tex., Powell.—J. E. Christian let contract to E. L. Barnes, Powell, to erect residence; cost \$6900; M. T. Horne, Archt., Powell.

Tex., San Antonio.—H. P. Drought let contract to J. C. Dielmann, San Antonio, to erect residence; 2 stories; tile and stucco; cost \$12,000; L. M. J. Dielmann, Archt., San Antonio.

Tex., Weatherford.—M. E. Park has plans by and let contract to W. T. Winston, Weatherford, to erect residence; 1 story; 30x66 ft.; brick veneer; red wood shingle roof; edge grain pine floors; electric lights; cost \$5000. Address contractor. (Lately noted.)

Tex., Weatherford.—Rev. C. H. Ray has plans by and let contract to W. T. Winston, Weatherford, to erect residence; 1 story; 66x50 ft.; brick veneer; metal shingle roof; edge-grain pine floors; electric lights; cost \$6000. Address contractor. (Lately noted.)

Va., Roanoke.—J. A. Hoover, South Roanoke, let contract to W. H. Mason, Roanoke, to erect residence; 30x40 ft.; 2½ stories; cost \$6500; let contract for electric work to Richardson-Wayland Electric Corp., plumbing to Forbes & Weddell, and heating to Engloby Bros., all of Roanoke; H. M. Miller, Archt., Roanoke.

W. Va., Charleston.—W. J. Zimmerman let contract to W. F. Shawver Co., Charleston, to remodel residence; tile roof; cost \$10,000; H. Rus Warne, Archt., Masonic Temple, Charleston.

GOVERNMENT AND STATE

D. C., Washington.—Comfort Station.—Government let contract to A. C. Moses Construction Co., 915 New York Ave., Washington, to erect comfort station; cost \$3800.

Fla., Key West.—Naval Air Station.—Bureau of Yards and Docks, Navy Dept., Washington, D. C., let contract to Krabi Construction Co., 350 Clark St., Chicago, for extension to naval air station; 120x140 ft., 40x27 ft., 100x50 ft. and 140x40 ft.; frame; rubberoid roof; wood floors; cost about \$110,000 complete; also let contract at \$65,000 and \$108,118 to H. F. Friestedt Co., 327 S. La Salle St., Chicago, to construct marine quarters and barracks. (Lately noted.)

Md., Baltimore.—Ordinance Depot.—War Department, Washington, D. C., let contract

to Smith, Hauser & MacIsaac, New York, to erect addition to Curtis Bay Ordnance Depot; plans include 30 powder magazines, 12 TNT magazines, 1 or 2 docks and general storage warehouse and about 14 mi. of railroad track; cost \$4,000,000.

Md., Camp Meade.—Training Camp.—Cantonment Division, War Department, Washington, D. C., let contract to Smith, Hauser & MacIsaac, Inc., New York, to construct buildings for training camp for Signal Corps, with accommodations for 11,000 men; plans include new barracks, extensions to hospitals, filtration plants, sewerage system, etc.; cost \$4,000,000.

Md., Magnolia.—Arsenal.—Government let contract to Austin Co., 1319 Filbert St., Philadelphia, to construct foundation for 10 buildings at Edgewood Arsenal; 100x200 ft.; cost \$200,000; construction by day labor.

Okla., Bartlesville.—Experimental Station.—Department of Interior, Washington, let contract to A. E. Madorie, 409 Reliance Bldg., Kansas City, to erect experimental station; 57x37 ft. and 142.2x42.3 ft.; concrete and brick; vulcanite asbestos shingle roof; cost \$36,800; Keene & Simpson, Archts., 400 Reliance Bldg., Kansas City. Address contractor at Maire Hotel, Bartlesville.

Tex., Galveston.—Knights of Columbus let contract to W. H. Janssen, Galveston, to erect building at Fort Crockett. (See Association and Fraternal.)

Va., Hampton Roads.—Hospital Corps School.—Bureau of Yards and Docks, Navy Dept., Washington, let contract to King Lumber Co., Charlottesville, Va., to erect hospital corps school; 42x86 ft.; 2 stories; brick; specification roof; wood floors; cost \$100,000. Address contractor. (Lately noted.)

Va., St. Julians Creek.—Administration Building.—Bureau of Yards and Docks, Navy Dept., Washington, let contract to Johnson-Kierman Co., Citizens' Bank Bldg., Norfolk, to erect administration building; 2 stories; cost \$16,000.

Va., Quantico.—Marine Barracks.—Bureau of Yards and Docks, Navy Dept., Washington, let contract to King Lumber Co., Charlottesville, Va., to erect marine barracks; frame; composition roof; wood floors; cost \$1,000,000. Address contractor. (Lately noted.)

HOSPITALS, SANITARIUMS, ETC.

Mo., Kansas City.—Providence Hospital let contract on percentage basis to Swenson Construction Co., Kansas City, to erect hospital; main building, 3 stories and basement, 50x120 ft.; 2 wings, 3 stories and basement, 40x56 ft. each; boiler-house, 1 story, 40x50 ft.; brick smokestack, 90 ft. high by 36 ft. in diam.; Wight & Wight, Archts., First National Bank Bldg.; W. E. Fillham, Mechanical Engr., Inter-State Bldg.; both of Kansas City.

Okla., Oklahoma City.—St. Anthony Hospital let contract to Neubauer & Tay, Oklahoma City, to erect addition to hospital; cost \$16,000.

Tex., Wichita Falls.—State, W. P. Hobby, Governor, Austin, let contract at \$43,048 to J. C. Dellmann, San Antonio, to erect buildings for Northwest Texas Insane Asylum to include administration building, receiving wards, infirmaries, dining hall, nurses' home, laundry and power-house; let contract at \$5307 to J. M. Johnson Co., Dallas, for wiring and at \$10,772 to A. H. Shafer & Co., San Antonio, for plumbing; bids for heating rejected; fireproof construction; accommodate 500; Chas. H. Page & Bro., Archts., Austin. (Lately noted.)

Va., Catawba Sanatorium.—State Board of Health let contract to erect receiving hospital and central heating plant at Catawba Sanatorium; 350x100 ft.; fireproof construction; slate roof; passenger elevator; Chas. M. Robinson, Inc., Archt., Times-Dispatch Bldg., Richmond; H. M. Miller, Supervising Archt., Roanoke. (Lately noted.)

MISCELLANEOUS

Md., Frederick.—Home.—Church of Brethren let contract to W. H. Miller, Williamsport, Md., to erect addition to Old Folks' Home at San Mar; 2 stories; brick; 12 rooms, including chapel 30x34 ft.

Mo., Kansas City.—Gospel Hall.—Gospel Hall Assn. let contract to C. C. Peterson & Son, 225 Railway Exchange Bldg., Kansas City, to erect gospel hall; 2 stories and basement; 47x70 ft.; E. O. Brostrom, Archt., Reliance Bldg., Kansas City; also let following additional contracts: Roofing, Patent Vulcanite Roofing Co.; heating, Campbell Heating Co.; plumbing, W. H. Reed Plumbing Co.; painting, John B. Winter; electric wiring, Magee Electric Co.; all of Kansas City. (Lately noted.)

N. C., Kannapolis.—Dormitory, etc.—Camaron Mfg. Co. let contract to T. C. Thompson & Bro., Charlotte, to erect dormitory, clubhouse, gymnasium and swimming pool for women; 4 stories; 200x150 ft.; hollow tile; Barrett specification slag roof; hardwood floors; steam heat; cost \$150,000; Heard, Cardwell & Chesterman, Archts., Danville, Va.; all materials purchased and sub-contracts let.

N. C., Winston-Salem.—Undertaking Establishment.—Frank Vogler & Sons let contract to Fogle Bros. Co., Winston-Salem, to remodel building on S. Main St.; plans call for new stucco front, plate-glass windows, alterations to interior of building, doubling of seating capacity, etc.

RAILWAY STATIONS, SHEDS, ETC.

Tex., Somerville.—Gulf, Colorado & Santa Fe Ry., F. Merritt, Ch. Engr., Galveston, let contract to T. Telephon, Houston, to erect fuelhouse; concrete and brick; tar and gravel roof; metal gutters; also to erect storehouse; wood and corrugated iron; tar and gravel roof; metal gutters; steam heat; electric wiring; cost \$4500 and \$6000, respectively.

SCHOOLS

Ala., Ozark.—City let contract to F. M. Dobson, Montgomery, Ala., to erect graded school on Cook St.; 2 stories and basement; brick; metal roof; double floors with felt between; cost about \$4000; steam heat, \$2500; electric lights, \$1000; T. F. Lockwood, Archt., Montgomery. (Previously noted.)

Ala., Sheffield.—City voted \$25,000 bonds to complete high school under construction, for which P. E. Bostick, First National Bank Bldg., Birmingham, has contract; 114x72 ft.; 3 stories; ordinary construction; brick and wood; tar and gravel roof; wood floors; steam heat; electric fans; plans by and construction under supervision of King & Burnham, Birmingham. (Previously noted.)

D. C., Washington.—Associated Professors of St. Mary's Seminary, Rev. E. R. Dyer, Paca St. and Druid Hill Ave., Baltimore, let contract to C. J. Cassidy Co., Southern Bldg., Washington, to erect school at 4th St. and Michigan Ave. N. E.; 6 stories; 61x42 ft.; tower, 4 stories, 41x41 ft.; cloister, 2 stories, 80x22 ft.; McGinnis & Walsh, Archts., 100 Boylston St., Boston; Prof. Geo. A. Weschler, Engr., Catholic University, Brookland, D. C.

Fla., Apopka.—Orange County let contract to F. E. Zapp to erect school building; brick; Barrett specification or Johns-Manville roofing; wood floors; hot-air heat; F. H. Trimble, Archt., Orlando, Fla. (Lately noted.)

Fla., Baldwin.—Duval County Board of Education, Jacksonville, Fla., let contract at \$24,000 to O. P. Woodcock, Jacksonville, to erect school; 75x140 ft.; 8 rooms; common brick; wood floors; cost \$15,000; Rutledge Holmes, Archt., Jacksonville. (Previously noted.)

Ga., Columbus.—Wynnton School Dist. Trustees let contract to Gifford & Whitaker, Columbus, to erect school building, and to Walker Electric Co., Columbus, for heating and plumbing; plans by T. F. Lockwood, Columbus, call for structure 80x75 ft.; concrete and brick; metal roof; ordinary floor construction; steam heat; electric lights; cost \$25,000. (Lately noted.)

Fla., Concord.—Gadsden County Board of Public Instruction, Quincy, Fla., let contract to L. W. Cooper, Quincy, Fla., to erect school building. (Lately noted.)

Ga., Pembroke.—School Board let contract to H. P. Womble and U. J. Bacon, Pembroke, to erect 2 additional rooms and remodel school building.

La., Monroe.—Ouachita Parish School Board let contract to W. R. Britt, Calhoun, La., to erect school building in Ward 9; 2 rooms; 26.6x36 ft.; wood; shingle roof; pine floors; cost \$2050; J. W. Smith, Archt., Monroe. (Lately noted.)

Mo., Aurora.—Board of Education let contract to A. T. Bramer & Son, Monett, Mo., to erect public school; 70x140 ft.; 1 story and basement; brick, concrete and Carthage cut stone; vulcanite asphalt built-up roof; reinforced concrete and wood floors; cost \$22,000; J. L. Heckenlively, Archt., Springfield, Mo.; construction begun. Address contractors. (Other contracts lately noted.)

Mo., Creve Coeur.—St. Monica Parish, Rev. J. F. Hoesehem, pastor, let contract to C. A. Welsh Construction Co., Central National Bank Bldg., St. Louis, to erect school; 2 stories and basement; 40x82 ft.; cost \$25,000; H. P. Hess, Archt., St. Louis.

N. C., Winston-Salem.—Slater State Normal & Industrial School let contract to

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Smith & Hauser, Winston-Salem, to erect 3-story brick building for industrial department; cost \$25,000; W. C. Northup, Archt., Winston-Salem. (Previously noted.)

Okla., Douthat.—R. D. Pollard has contract to erect four 8-room schools at Douthat, Picher, Cardin and North Century; total cost \$66,000.

Okla., Oilton.—Board of Education let contract to R. D. Pollard, Claremore, Okla., for school building; 1 story and basement; 70x138 ft.; cost \$60,000; Tonini & Bramblet, Archts., Terminal Bldg., Oklahoma City.

Okla., Hockersville.—School Board let contract to Tonini & Bramblet, Oklahoma City, Okla., to erect proposed school; 4 rooms; brick; cost \$24,000.

Okla., Picher.—R. D. Pollard has contract to erect school building. (See Okla., Douthat.)

Okla., Shawnee.—Oklahoma Baptist University will erect gymnasium and dormitory; 3 stories; 10 rooms; brick; millwork; built-up roof; fireproof; reinforced concrete floors; cost \$30,000 C. E. Higgins, Contr.; A. C. Davis, Archt., Shawnee.

Okla., Sulphur.—City let contract to G. C. Fries, Sulphur, for dormitory; 2 stories and basement; cost \$36,000; Jewell Hicks, Archts., Durant, Okla.

Tex., Cundiff.—School Board let contract to Mr. Bobbit for carpenter work on school building; bungalow type; cost \$3000; construction under supervision of J. W. Fulcher, Supt. Board of Education, Jacksboro, Tex.; Masonic Lodge will erect rooms on second story.

Va., Callands.—Callands District School Board let contract to Dodd & Wells, Whitwell, Va., to erect school building; wood; metal shingle roof; wood floors; cost \$10,000. (Lately noted.)

Va., Mt. Crawford.—School Board of Rockingham County, Harrisonburg, Va., let contract to J. Holmes Moore, Harrisonburg, to erect 6-room graded school; 2 stories; 40x65 ft.

STORES

D. C., Washington.—Jas. O'Donnell let contract to D. E. Nichol, 4324 Georgia Ave. N. W., Washington, to alter store at 7th and G Sts. N. W.; cost \$5500; Frank G. Pierson, Archt., 915 Washington Life & Trust Bldg.

D. C., Washington.—Mass-Lessner Co. let contract to Wm. Beahm, 617 14th St. N. W., Washington, to repair store at 917 F St. N. W.; cost \$3000; Jas. E. Cooper, Archt., 310 Corcoran Bldg., Washington.

Fla., Crestview.—F. M. Dobson, Montgomery, Ala., has contract to erect 4 store buildings; brick; cost \$10,000; W. C. Frederic, Archt., Pensacola.

La., Alexandria.—A. Wettermark let contract to S. J. Burgess to erect building; brick; cost \$6500.

La., New Orleans.—J. H. Schauter let contract to S. Stone to repair building; brick; cost \$1200.

La., Lake Charles.—Gill & Trotter let contract to P. Oliver & Sons, Lake Charles, to erect business building and garage; 2 stories; brick and stucco; E. W. Phillips, Archt., Lake Charles.

Md., Baltimore.—J. Castberg & Son, 106 N. Eutaw St., let contract to Singer-Pentz Co., Equitable Bldg., Baltimore, to alter 6-story building at Lexington St. and Park Ave.; install show windows, entrance, elevator, etc.; cost \$9000; let contract to Otis Electric Co., Franklin St., Baltimore, for electric work. (Lately noted.)

Mo., St. Louis.—E. P. Shasser, Fullerton Bldg., St. Louis, has contract to erect store building at 1315-17 Washington Ave.; 1 story; 137x51 ft.; cost \$25,000; Will Levy, Archt., Wright Bldg., St. Louis.

Mo., St. Louis.—E. & H. Freund let contract to Wm. Elias, 4833 Fountain St., St. Louis, to erect addition to and alter store building at 3171 S. Grand Ave.; 1 story; 50x29 ft., and 2 stories, 120x75 ft.; cost \$10,000; Wm. Wedeneyer, Archt., Wainwright Bldg., St. Louis; let contract for plumbing to J. F. Corrigan; electric wiring, Eclipse Electric Co.; painting, Hange Painting Co., all of St. Louis. (Previously noted.)

Mo., St. Louis.—O'Fallon Estate, 201 N. 4th St., let contract on percentage basis to Jas. A. Godfrey & Co., 105 N. 7th St., St. Louis, to erect 5 store buildings; 1 story and basement; 142x75 ft.; cost \$15,000.

Mo., St. Louis.—S. S. Kresge Co., Detroit, Mich., let contract to Geo. A. Fuller Co., 540 Penobscot Bldg., Detroit, to erect store building at 6th, Washington and St. Charles Sts.;

3 stories and basement; 175x150 ft.; cost \$450,000; let plumbing contract to Thos. Sheehan, 1710 Olive St., St. Louis, and electric wiring, Gray Bros. Building Co., Detroit.

Tex., Houston.—S. Myer let contract to H. H. Yates, Houston, to erect business building; pressed brick; metal partitions; cost \$3500; A. De Lisle, Archt., Houston.

Tex., San Antonio.—M. Oppenheimer, New York, let contract to J. C. Dielmann, San Antonio, to erect 2-story reinforced concrete business building; cost \$17,000; A. Giles Co., Archt., San Antonio.

Tex., Waco.—H. M. Baine let contract to J. E. Johnson, Waco, to erect Piggly Wiggly Store No. 2; 50x119 ft.; 2 stories; cost \$18,000; Ross & Cason, Archts., Waco.

Va., Norfolk.—Baldwin Bros., Agts., Brooke Ave., let contract to W. T. Gregory, Law Bldg., Norfolk, to erect store and office building; 6 stories; 80x213 ft.; reinforced concrete; gravel roof; Truscon joist floor construction; steam heat; electric lights; cost \$250,000; Neff & Thompson, Archts., Seaboard Bank Bldg., Norfolk. (See Bank and Office.)

Va., Roanoke.—Tompkins Bros. let contract to Martin Bros., Roanoke, to erect store building; 1 story; 25x60 ft.; cost \$4500; G. R. Ragan, Archt., Roanoke.

Air Registers.—R. E. Gilmore, Post, Tex. Prices on air registers for \$10,000 school building.

Bars (Angle).—See Rails.—Isaac Joseph Iron Co.

Blue-printing Machinery.—P. O. Box 794, Wilmington, N. C.—Prices on complete electric blue-printing outfit for commercial use; consider used equipment, if good condition; state shipping point.

Boilers (Steam; Locomotive).—Warner Moore & Co., Richmond, Va.—Prices on three 30 or 35 H. P. locomotive-type steam boilers; could use portable boilers or the Economic; to carry not less than 100 lbs. steam; Hartford Insurance inspection before shipment; prompt delivery.

Boilers.—Chantiers & Ateliers Augustin Normand L'Administrateur Deleque, 67 Rue du Perry, Havre, France.—Boilers for ships.

Boiler (Water-tube).—Frank Guild, Terrell, Tex.—600 H. P. water-tube boiler, 1 or 2 units, 180 to 200 lbs. pressure.

Boiler, etc.—Supervising Archt., Treasury Dept., Washington, D. C.—Bids until July 19 to furnish new boiler, stack, etc., in U. S. Postoffice at Sedalia, Mo.; specifications, etc., at Archt.'s office and office of Custodian at Sedalia.

Bottles, etc.—Southern India Medicine Co., 314 E. Main St., Chattanooga, Tenn.—Correspondence with manufacturers of bottles; False paper and tin boxes.

Boxes (Paper; Tin).—Southern India Medicine Co., 314 E. Main St., Chattanooga, Tenn.—Correspondence with manufacturers of paper and tin boxes. (See Bottles, etc.)

Brick.—See Building Materials.—R. E. Gilmore.

Building Materials.—R. E. Gilmore, Post, Tex.—Prices on reinforcing rods, composition roofing, drinking fountain, brick, metal lath, air registers for school building to cost \$10,000.

Cars (Mine).—Gordon-Miller Coal & Coke Co., 1402 Lincoln Bank Bldg., Louisville, Ky.—Prices on 50 mine cars.

Casings.—Eastern Imperial Oil Co., Jas. P. McCloskey, Engr., Huntington, W. Va.—Prices on well casing.

Checks.—See Cleats, Bits, etc.—Chas. R. Fife Co.

Cleats, Bits, etc.—Chas. R. Fife Co., 1411 Central National Bank Bldg., St. Louis, Mo. Prices on cleats, checks, bits, bands, etc., for ships.

Compressor (Air).—W. S. Taylor Co., Chattanooga, Tenn.—Prices on steam or belt-driven air compressor for 1 drill of about 50 cu. ft.

Cone (Ice Cream) Machinery.—A. D. Stearns, P. O. Box 623, Savannah, Ga.—Data and prices on ice-cream cone machinery.

Crane (Locomotive).—Locran, care Manufacturers Record, Baltimore, Md.—Prices on locomotive crane, 15 to 25 tons.

W. Va., Montgomery.—H. Lane and J. B. Maris let contract to W. H. Coley, Montgomery, to erect store building; 2 stories; brick; cost \$10,000.

W. Va., Mullens.—J. A. Radman let contract to W. J. Snidom, Mullens, to erect store and apartment building; 3 stories and basement; 27x61 ft.; cost \$15,000; A. F. Wy-song, Archt., Princeton, W. Va.; let contract for plumbing to W. A. Badell, Mullens.

WAREHOUSES

Md., Baltimore.—Security Storage & Trust Co. let contract to W. T. Childs, 14 W. 20th St., Baltimore, to erect addition to warehouse at 13-19 W. North Ave.; 6 stories; 25x68 ft.; cost \$18,000; Fred E. Beall, Archt., 1335 Gilmore St., Baltimore.

Okla., Hugo.—Choctaw Peanut Co. let contract to J. G. Shelton, Hugo, to erect warehouse and erect additional story to building; cost \$1500; Western Engineering Co., Archt., Dallas, Tex.

Va., Richmond.—Liggett & Meyers Tobacco Co. let contract to John T. Wilson Co., Mutual Bldg., Richmond, to erect warehouse at 6th and Canal Sts.; 1 story; 96x192 ft.; brick and mill construction; slag roof; concrete floors; cost \$30,000. (Lately noted.)

MACHINERY, PROPOSALS AND SUPPLIES WANTED

"WANTS"

Crankshaft Straightening.—Chas. R. Fife Co., 1411 Central National Bank Bldg., St. Louis, Mo.—To have large crankshafts straightened; have slight bends— $\frac{3}{4}$ of an in.

Desk.—Jonesboro Supply House, Jonesboro, Tenn.—Prices on bank check desk, pedestal style, onyx or marble, with plate-glass top; can use second-hand, if first-class condition.

Ditching Machinery.—S. R. Hildebrand, Room 602 Drake Bldg., Easton, Pa.—Prices on 2 trench ditchers and loaders; second-hand.

Dust Collectors.—Dixie Mattress Co., 1405 W. Main St., Richmond, Va.—Prices on system for taking off dust from factory; building is 25x90 ft., 3 stories.

Electric Wiring.—R. E. Stratton, Jr., City Clerk, Clarksdale, Miss.—Bids until July 15 on electric wiring for high school; plans and specifications at office J. H. Johnson, Secy. School Board, and R. H. Hunt, Archt., Chattanooga, Tenn.

Electrical Equipment.—Black Raven Coal Co., H. W. Norris, V.-P. and Mgr., Willard, Ky.—Electrical equipment for coal mining.

Electrical Equipment, Copper, Street Lamps, etc.—Panama Canal, A. L. Flint, General Purchasing Officer, Washington, D. C.—Bids until July 24 to furnish sheet copper, street lamps, fuses, batteries, outlet boxes, conduits, reflectors, sockets, switches, fans, copper wire, wire-rope cable and clips, platform scale, hammer handles, screws, copper tacks, padlocks, rim locks, vulcanizing material, burlap, paper, pencils, bicarbonate of soda, paint dryer, white zinc, and zinc oxide; blanks, etc., relating to circular (No. 1222) obtainable at this office or offices Asst. Purchasing Agents, 24 State St., New York; 606 Common St., New Orleans, and Fort Mason, San Francisco; also from United States Engr. offices in principal cities throughout United States.

Elevator.—Treasury Dept., Office Jas. A. Wetmore, Acting Supvr. Archt., Washington, D. C.—Bids until July 18 to install electric passenger elevator, etc., in U. S. Postoffice and Courthouse, Fort Worth, Tex.; drawings and specifications on file.

Electric-light Equipment.—Garber Light & Ice Co., Wm. Musser, Mgr., Garber, Okla. Prices on equipment of outside wiring and poles for electric-light system to cost \$10,000.

Engine (Hoisting).—Warner Mining Co., Adairsville, Ga.—Prices on single-drum hoist engine.

Engines.—Chantiers & Ateliers Augustin Normand L'Administrateur Deleque, 67 Rue du Perry, Havre, France.—Engines for ships.

Forms (Cement and Sand).—R. H. Easley, Hotel Grace, Clarksville, Va.—Prices on forms for manufacturing sewer pipe of sand and cement.

Furniture.—Albert Anderson, 115 Bird

Ave., Miami, Fla.—Bids on furniture for \$30,000 apartment-house.

Fountain (Drinking).—R. E. Gilmore, Post, Tex.—Prices on drinking fountain for \$10,000 school building.

Furniture (Bank and Office).—Jonesboro Supply House, Jonesboro, Tenn.—Catalogues and dealers' prices on bank and office furniture.

Glass (Spun or Fabric).—B. Tunstall, Box 367, Mobile, Ala.—Correspondence with manufacturers of spun or fabric glass.

Hardware.—R. E. Stratton, Jr., City Clerk, Clarksdale, Miss.—Bids until July 15 on finished hardware for high school; specifications at office J. H. Johnson, Secy. School Board, and R. H. Hunt, Archt., Chattanooga, Tenn.

Heater (Feed Water).—"Feed Water Heater," care of Manufacturers Record, Baltimore, Md.—Prices on Cochran special-hand feed water heater and purifier, capacity for 250 to 300 H. P. boiler; give full description.

Heating Plant.—R. H. Easley, Hotel Grace, Clarksville, Va.—Data and prices on low-pressure heating apparatus for 40-room hotel.

Ingot (Steel).—Chas. R. Fife Co., 1411 Central National Bank Bldg., St. Louis, Mo.—Prices on quantities of soft steel ingots.

Ink Machinery.—Francesco S. Gonzalez, 417 Ave. Matamoros, Torreon, Coah., Mexico.—Machinery for manufacturing ink.

Lathe (Engine).—Greensboro Machine Co., Greensboro, N. C.—Dealers' prices on 18 or 18-in. screw-cutting engine lathe.

Leather-products Machinery.—Kretschmar Mfg. Co., Chas. Kretschmar, Mgr., 615 S. Laredo St., San Antonio, Tex.—Data and prices on machinery to tan leather and to manufacture check lines, hame straps, whip lashes, etc.

Levee Construction.—Board State Engrs., Frank M. Kerr, Chief State Engr., 213 New Orleans Court Bldg., New Orleans, La.—Bids until July 15 to construct Douglas Island Levee, Caddo Parish, Red River, La. right bank; 26,000 cu. yds.; information, forms, etc., on application.

Levee Construction.—Commrs. Fifth Louisiana Levee Dist., O. W. Campbell, Secy., at office Board State Engrs., 213 New Orleans Court Bldg., New Orleans, La.—To enlarge levee, Madison Parish, Mississippi River, right bank; Harris Field Levee; search ditch and riverside enlargement; 27,000 cu. yds.; information, forms, etc., on application to State Engrs., New Orleans Court Bldg., or to Secretary Campbell.

Locomotive.—W. S. Taylor Co., Chattanooga, Tenn.—Prices on 15 to 18-ton 4-in. gauge, saddle-tank locomotive, with good brakes, and in first-class running condition.

Locomotives.—S. R. Hildebrand, Room 602, Drake Bldg., Easton, Pa.—Prices on two 24-gauge saddle tank locomotives; second-hand.

Lumber.—Gordon-Miller Coal & Coke Co., 1402 Lincoln Bank Bldg., Louisville, Ky.—Prices on car of lumber.

Machinery Builders.—F. W. Edwards, 90 Elizabeth Ave., Charlotte, N. C.—To correspond regarding award of contract for building automatic (Neal) cotton pickers for the field.

Metal Lath.—See Building Materials.—R. E. Gilmore.

Milling Machine.—Greensboro Machine Co., Greensboro, N. C.—Dealers' prices on shaper or milling machine.

Mining Machinery.—Black Raven Coal Co., H. W. Norris, V.-P. and Gen. Mgr., Willard, Ky.—Coal-cutting machines, screens, tipple scales and electrical equipment.

Motor (Electric).—Greensboro Machine Co., Greensboro, N. C.—Dealers' prices on 10 H. P., 220-volt, 60-cycle, 3-phase motor.

Paving.—Baltimore (Md.) Board of Awards, City Hall.—Bids until July 17 to construct cement footways around city property in various sections of city, known as Group No. 12; specifications, etc., from R. M. Cooksey, Highways Engr., City Hall.

Pipe (Sewer) Machinery.—See Forms (Cement and Sand).—R. H. Easley.

Piping.—J. H. Anderson, Remberts, S. C.—Data and prices on piping for pumps.

Powder.—Gordon-Miller Coal & Coke Co., 1402 Lincoln Bank Bldg., Louisville, Ky.—Prices on car of powder.

Power Plant.—Gordon-Miller Coal & Coke Co., 1402 Lincoln Bank Bldg., Louisville, Ky.—Prices on power plant.

Press (Hydraulic).—Linpress, care Manufacturers Record, Baltimore, Md.—Prices

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

and description of hydraulic press, linseed type, about 15 plates, capacity 500 to 600 tons pressure; for immediate delivery.

Press (Drill).—Greensboro Machine Co., Greensboro, N. C.—Dealers' prices on 20 to 24-in. drill press.

Pumps.—J. H. Anderson, Remberts, S. C.—Data and prices on pumps for wells.

Rails.—S. R. Hildebrand, Room 602, Drake Bldg., Easton, Pa.—Prices on curved 24-gauge rail; second-hand.

Rails.—Isaac Joseph Iron Co., 525 Reading Road, Cincinnati, Ohio.—Prices on 2000 tons 36 and 60-lb. relaying rails, with angle bars; Southern delivery.

Railway Construction.—Bureau Yards & Docks, Navy Dept., Washington, D. C.—Bids until July 15 to construct railway from White Plains to Indian Head, Md.; estimated cost \$600,000; specifications No. 3060.

Reinforcing Rods.—R. E. Gilmore, Post, Tex.—Prices on reinforcing rods for \$10,000 school building.

Road Construction.—St. Lucie County Commrs., C. H. Edwards, Chrmn., Fort Pierce, Fla.—Bids to construct and hard

Seenger, Box 488, Kerrville, Tex.—Addresses of manufacturers of or dealers in portable railroad tie sawmills.

Scales (Tippie).—Black Raven Coal Co., H. W. Norris, V.-P. and Mgr., Willard, Ky. Tippie scales for coal mine.

Sewer Construction.—City of Leesburg, Fla., W. H. Porter, City Clerk.—Bids until July 22 to construct storm-water sewer system; 2187 ft. salt-glazed vitrified pipe ranging from 24 to 10 in. diam.; plans and specifications on file with City Clerk and W. M. Francisco, Engr., Zephyrhills, Fla.

Shaper.—See Milling Machine.—Greensboro Machine Co.

Shovel (Steam).—Warner Mining Co., Adairsville, Ga.—Prices on second-hand steam shovel, about $\frac{1}{2}$ to $\frac{3}{4}$ yd. capacity.

Sulphur Ovens.—Texas Sulphur Co., H. M. Tippet, Secy., Orange, Tex.—Data and prices on Sicilian system for extracting sulphur from ore.

Shipyard Machinery.—Chantiers & Ateliers Augustin Normand L'Administrateur Deleque, 67 Rue du Pery, Havre, France.—Machinery for shipbuilding and power equipment for ships.

Veneer Machinery.—Louisburg Cotton Oil Mill, Louisburg, N. C.—Correspondence with manufacturers of machinery for making veneer from gum and poplar.

Well-drilling Equipment (Oil).—Eastern Imperial Oil Co., Jas. P. McCloskey, Engr.,

Huntington, W. Va.—Prices on drilling machinery, casing, etc.

Well-drilling Machinery.—J. H. Anderson, Remberts, S. C.—Data and prices on well-drilling machinery.

RAILROAD CONSTRUCTION

RAILWAYS

Ala., Birmingham.—St. Louis-San Francisco Railway contemplates expending \$1,000,000 in the Birmingham District for extension of a number of passing tracks and other operating improvements. F. G. Jonah, St. Louis, Mo., is Chief Engr.

Ky., Whitesburg.—Louisville & Nashville R. R., it is reported, has let contracts to build coal branches along Sandlick, Smoot and Millstone creeks, construction to start immediately. H. C. Williams, Louisville, Ky., is Ch. Engr. of Constr.

Md., Baltimore.—Empire Engineering Co., Inc., Baltimore, is contractor for additional yard tracks at Mount Winans and Claremont, Md., on the Baltimore & Ohio Railroad in the suburbs of Baltimore. Construction begun. Work heavy, including two 85-ft. steel bridge spans. H. A. Lane, Baltimore, is Chief Engr.

Md., Cumberland.—Western Maryland Ry. has let contract to Anderson Bros. of Altoona, Pa., to build four more yard tracks at Ridgely, near Cumberland, and also for other improvements there. A short cut-off is also to be built, besides second track to North Branch and a tunnel parallel to Welton tunnel. Total cost estimated at \$2,000,000. H. R. Pratt, Baltimore, is Ch. Engr.

Md., Indian Head.—Reported that sealed

bids are invited until July 15 for building of railroad track on the proposed line from White Plains to Indian Head, 14½ mi. Specification 3060 of the Bureau of Yards and Docks, Navy Department, Washington, D. C.

N. C., Charlotte.—American Power & Railway Co. of Charlotte, authorized capital \$100,000, is chartered to operate electric and steam railroads; also to generate and transmit electric power. Incorporators: H. M. Victor, C. B. Bryant and D. D. Trawick.

Okla., Miami.—Miami Business Men's League has appointed a committee to build and operate an electric or other interurban railway through the Miami mining district. Estimated cost about \$650,000. Committee is as follows: Dr. W. L. McWilliams, George L. Coleman, John Cheyne, G. W. Dick, J. T. Whaley, W. H. Trapp, F. D. Griffith, H. D. Rockhold, S. A. Kenoyer and J. S. Mabon.

Va., Norfolk.—Double tracking of the Virginian Railway and the construction of a coal storage yard of 500,000 tons capacity at the Sewalls Point terminal of the road are reported under consideration. H. Fernstrom is Ch. Engr. at Norfolk.

W. Va., Morgantown.—Contract is reported let to Keely Bros. of Clarksburg, W. Va., for grading in connection with improvement of the Morgantown & Wheeling R. R. between Randall and Barker, work to start immediately.

FOR THE BENEFIT OF

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CONTRACTORS BANKERS MANUFACTURERS and OTHERS

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INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Two Vice-Presidents Elected.

W. H. Cullan, general manager of plants, and W. P. Pressinger, general manager of sales, have been elected vice-presidents of the Chicago Pneumatic Tool Co., Chicago.

Official Changes.

The Traylor Engineering & Manufacturing Co., Allentown, Pa., announces the election of Samuel W. Traylor to be chairman of the board and the election of William J. Roberts, formerly vice-president and general manager, to succeed him as president. H. Battersby, formerly treasurer, was elected vice-president and treasurer.

Sales Representative Named.

The Chicago Pneumatic Tool Co. announces the appointment of L. C. Sprague as its special representative in connection with the sale of pneumatic tools to railroads. He was formerly connected with this company, but was more recently with the railroad department of the H. W. Johns-Manville Company, New York City. His long relation with the railroads especially fits him for the work to which he has now been assigned.

A Luminous Material.

Marvellous, which is described as a self-luminous compound made with radium, for clock and watch dials, or other articles to be illuminated for night use, is the subject of a small but very interesting booklet issued by the Cold Light Mfg. Co., 558 West 158th street, New York. This substance in powder form is of a slightly yellowish color; in applied form it resembles a cream-colored enamel. At night it gives a steady glow of a soft greenish tint. It is said that the highest grades of it can be seen against the brightest moonlight and even at dusk. There are many interesting pictures included in the book, which tells of how the radium-bearing ore is obtained from the mines in Colorado and Utah.

Installing Pasteurizing Plant.

The Dixie Engineering & Insulating Co., Atlanta, Ga., has sold the Lee County Guernsey Pasteurizing Co., Wisacky, S. C., all of their equipment, including Continental uniflow refrigerating compressor, rock cork insulation, Victor cooler doors, Davis commercial pasteurizer, etc. All of the milk-handling equipment is being furnished through the Dixie Company by the Davis-Watkins Dairymen's Manufacturing Co., this including the refrigerating machine. The rock cork insulation is also being furnished through the same company by the Banner Rock Products Co. of Alexandria, Ind. The Dixie Company is now erecting the plant and will soon have it in operation.

Business Change.

H. C. Donaldson, manager of the River Coal Co. and River & Ocean Towing Co., has resigned to become associated with the well-known firm of Woodward, Wight & Company, shipchandlers and general supply merchants at New Orleans.

He was assistant manager of the lake shipping and fuel department of the Pittsburgh Coal Co., at Cleveland, O., before being transferred to New Orleans in 1912 as manager of the Monongahela River Consolidated Coal & Coke Co.'s coal and towing business at New Orleans and Baton Rouge. He remained in charge of the Monongahela River interests there until that company sold out its large bunker and towing equipment to Morris Adler & Company of Birmingham in 1916, who own and operate the River Coal Co. and River & Ocean Towing Co., and he remained with them until now. Mr. Donaldson is a member of the executive committee from New Orleans on the National Board of Steam Navigation and Maritime Branch of the Board of Trade, and a member of the New Orleans Association of Commerce. Elmer E. Wood, treasurer of both the River Coal and River & Ocean Towing Cos., will succeed Mr. Donaldson as manager.

(Continued on page 80.)

surface road 8.4½ mi.; plans and specifications from Mr. Edwards; bids received until July 9.

Road Construction.—Colbert County Commrs., Tusculum, Ala.—Bids until Aug. 5 to gravel 7.71 mi. Jackson Highway, being part of State Trunk Road No. 8 between Tusculum and Russellville; 12,240 cu. yds. clay-gravel; 88 cu. yds. earth excavation; 7.7 mi. machine dressing; plans and specifications on file with State Highway Dept., W. S. Keller, State Highway Engr., Montgomery, and with Judge of Probate, Tusculum.

Road Construction.—McLennan County Commrs., Court, Waco, Tex.—Bids until Aug. 1 for grading, graveling, bridging and bituminous covering of $7\frac{1}{2}$ mi. of Waco-Marlin Road, State Highway No. 2, Federal Aid Project No. 12; plans and specification on file with Manton Hannah, County Engr. and State Highway Engr., Austin, Tex.

Road Construction.—Caldwell County Commrs., Court, J. T. Ellis, County Judge, Lockhart, Tex.—Bids to repair and construct 9 mi. gravel road between Lockhart and Niederwald, Tex.; plans and specifications from W. O. Washington, Engr., Lockhart; bids received until July 8.

Roofing.—See Building Materials.—R. E. Gilmore.

Screens.—Black Raven Coal Co., H. W. Norris, V.-P. and Mgr., Willard, Ky.—Screens for coal mining.

Sawmills (Portable; Railroad Tie).—Wm.

Slotted.—Loeran, care Manufacturers Record, Baltimore, Md.—Prices on slotter, 18 in. or larger.

Stoves and Heaters (Oil).—D. B. Love-man Co., Chattanooga, Tenn.—Prices on large oil heating stove, suitable for hall, with view to heat from stove supplying rooms to some extent.

Straightening Machines (Rail).—E. C. Sherwood, 50 Church St., New York.—Catalogues, cuts and dealers' prices on rail-straightening machines.

Surfacer.—Box 153, Shaw, Miss.—Light surfacer; single head, second hand; good condition.

Sweetmeats Machinery.—Francesco S. S. Gonzalez, 417 Ave. Matamoros, Torreon, Coah., Mexico.—Machinery for manufacturing sweetmeats.

Tannery Machinery.—Kretschmar Mfg. Co., Chas. Kretschmar, Mgr., 615 S. Laredo St., San Antonio, Tex.—Data and prices on tannery machinery. (See Leather-products Machinery.)

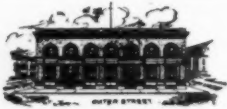
Testing (Steel) Machine.—Pennsylvania Equipment Co., 1420 Chestnut St., Philadelphia, Pa.—Second-hand testing machine, for determining tensile strength of steel test bars, 30,000 to 100,000 lbs. capacity.

Toy Machinery.—Francesco S. Gonzalez, 417 Ave. Matamoros, Torreon, Coah., Mexico.—Machinery for manufacturing toys.

Tubes.—S. R. Hildebrand, Room 602, Drake Bldg., Easton, Pa.—Prices on 300 18-ft. 4-in. tubes; second-hand.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

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FINANCIAL NEWS

The MANUFACTURERS RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

FINANCIAL CORPORATIONS

Ala., Anniston.—The Anniston City National Bank has changed its name to the Anniston National Bank; capital \$200,000; surplus \$160,000. (Lately noted.)

Ala., Birmingham.—Security Finance Co., capital \$25,000, incptd. W. R. Taylor, Birmingham, Pres.; F. M. Fincher, Atlanta, V.-P.; J. A. Selman, Birmingham, Secy. and Treas.

Ala., Monroeville.—Bank of Monroeville, capital \$25,000, incptd. by James K. Keyser and others. (Lately noted.)

Ala., Sheffield.—Muscle Shoals Loan & Investment Co., authorized capital \$75,000, is being organized. Among those interested

are O. A. Pearson and H. Connecke of New Orleans. Offices will be in the Little Rock Ark. Benton.—Farmers and Merchants National Bank applied for charter; capital \$25,000.

Fla., Palmetto.—Bank of Palmetto, capital \$25,000, applied for charter; incorporators J. A. Reeves, J. J. McMayney, H. B. Hall and J. O. Weldon.

Ga., Rebecca.—People's Bank chartered, capital \$25,000. Incorporators: W. J. Davidson, W. E. Evans and A. G. Smith, Belton, and A. C. Shell, Pitts.

Ky., Perryville.—Peoples' Bank & Trust Co. (conversion of Peoples' Bank), Inc., capital \$30,000; surplus \$16,000. W. C. Keen, Pres.; S. M. Ruple, V.-P.; C. D. Manion, Cashier. Business began July 2.

Ky., Stamping Ground.—Citizens' Bank, lately noted as incptd., only renewed its charter; no changes. James R. Glass, Director.

Okla., Balto.—Balto State Bank chartered; capital \$10,000; surplus \$1000; incorporators, N. E. McKenna, Balto; H. W. Tippet, Enid, and others. Business began July 1. (Lately noted.)

Okla., Fort Towson.—American National Bank applied for charter; capital \$25,000.

Okla., Hockerville.—First State Bank, 2d and Main Sts., chartered; capital \$25,000; incorporators, L. C. Hooker, R. R. Thomas and R. M. Chambers. (Lately noted under Hockerville.)

Okla., Oklahoma City.—Phoenix First Mortgage Co., capital \$300,000, incptd. by J. W. Erwin, J. W. McAlpine and C. R. Kinney.

Tenn., Knoxville.—Citizens' Bank & Trust Co. applied for charter; capital \$50,000. Incorporators: W. H. Sterchl, C. K. Vane, W. C. Baker and others. Business is expected to begin about August 1.

Tenn., Sweetwater.—Sweetwater First National Bank, capital \$60,000, will soon begin business. Dr. W. I. Hale, Pres.; J. R. Kilpatrick, Cashier; C. E. Young, Asst. Cashier.

Va., Birds Nest.—Farmers' Bank chartered, capital \$15,000. R. Fulton Powell, Pres. Berlin, Md.; W. R. Acworth, Secy, Birds Nest.

Tex., Dawson.—Liberty National Bank, conversion of the First State Bank, applied for charter; capital \$50,000.

Tex., San Juan.—First National Bank applied for charter; capital \$25,000.

Va., Norfolk.—Bankers' Trust Co., Atlantic and Plume Sts., has begun business; capital \$1,000,000. John D. Abbott, Pres.; J. B. Morgan, 1st V.-P.; C. E. Herbert, 2d V.-P.; C. D. Colonna, 3d V.-P.; James B. Denny, Gen. Counsel; W. P. Story, Treas.; O. B. Waddridge, Secy. The Bankers' Trust has absorbed the Mercantile Bank, Inc.

Va., Petersburg.—Petersburg Savings & Insurance Co. has decided to change its name to the Petersburg Savings & Trust Co. and make the following changes: Separate the banking and insurance departments; organize an insurance company under name of Petersburg Insurance Co. with \$300,000 capital and \$100,000 surplus, to take over the insurance business; add a trust feature to the banking department and change the name of the bank to the Petersburg Savings & Trust Co.; make capital \$1,000,000 and have a surplus of about \$1,250,000. The officers of both companies are T. F. Heath, Pres.; W. D. McKenny, V.-P.; P. M. Pollard, V.-P. and Cashier; Geo. W. Plummer, Asst. Cash.

NEW SECURITIES

Ala., Florence.—(School, Water).—City votes July 22 on \$300,000 of 5 per cent. 10-year \$1000 denomination bonds. M. M. Steplin, Mayor.

Ark., Fort Smith.—(Bridge).—City will probably vote on \$500,000 of bonds. Address The Mayor.

D. C., Washington.—(Sanitary).—Washington Suburban Sanitary Commission, 611 F St. N. W., Washington, will receive bids until 3 P. M. July 10 for \$50,000 of 5 per cent. 30-50-year \$1000 denomination bonds, dated July 1, 1918. William T. S. Curtis, T. H. and Duckett and Emory H. Bogley, Commrs.

Fla., Arcadia.—(Road, Bridge).—De Soto County votes July 16 on \$30,000 of Special Road and Bridge District bonds. A. L. Durranne is Clerk.

Fla., Blountstown.—(Road).—Calhoun County voted \$70,000 State-aid Road bonds. Address County Commrs.

Fla., Fort Pierce.—(School).—St. Lucie County Board of Public Instruction has

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to Robinson-Humphrey Co., Atlanta, Ga., \$12,000 of bonds School Dist. 8 and 9.

Fla., Miami—(Armory).—Dade County, Ben Shepard, Clk., does not anticipate issuing bonds in near future. It was lately noted that Dade County proposed issuing 5 per cent. armory bonds.

Fla., Pensacola—(Sewer, Water, Paving).—City votes August 16 to vote on \$50,000 sewer and drainage; \$25,000 water; \$500,000 grading and paving bonds. Address The Mayor.

Fla., South Jacksonville—(Water, Sewer, Light).—City has voted bonds for municipal improvements and steps will be taken to validate and offer them for sale. Address The Mayor.

Fla., Titusville—(School).—Brevard County Board of Public Instruction, E. Svedelius, Chrmn., will receive bids until July 15 for \$75,000 of 6 per cent. 25-year \$1000 denomination bonds Special School Tax District No. 4.

Fla., Wauchula—(Electric Plant).—City will call election to vote on \$30,000 of bonds for purpose of purchasing plant of the Wauchula Light & Power Co. and \$4000 for new machinery. Address The Mayor.

Ga., Commerce—(Light).—City sold on July 1 at \$15,156 to the Northeastern Banking Co., Commerce, \$15,000 of 5 per cent. \$500 denomination bonds; dated July 1, 1918, and maturing serially July 1, 1919, to July 1, 1923. C. A. Goodwin, City Clerk and Treas.

Ga., Jonesboro—(School).—Jonesboro School Dist. Trustees, T. C. Cannon, Chrmn., received bids until noon July 8 for \$10,000 of 5 per cent. 10-year \$500 denomination bonds, dated July 1, 1918.

La., New Orleans—(Canal).—Port of New Orleans Comms., W. B. Thompson, Pres., has authorized the issuing of not exceeding \$25,000,000. State of Louisiana Port Commission Serial Canal Gold Bonds. The ordinance provides for the sale and delivery of \$6,000,000 of 5 per cent. bonds of the issue.

Md., Brunswick—(Water).—City votes Aug. 5 on \$125,000 of bonds. Address The Mayor.

Miss., Bay St. Louis—(County).—Hancock County Suprs. have sold at par and accrued interest to the Merchants' Bank of Bay St. Louis \$25,000 of 6 per cent. \$500 denomination bonds to take up outstanding warrants; dated July 1, 1918; maturity July 1, 1919, to 1923, inclusive.

Miss., Canton—(Funding).—City has sold at par plus \$6100 to Wm. R. Compton Investment Co., St. Louis, \$18,000 of 5½ per cent. \$1000 denomination bonds. W. L. Dinkins, Mayor.

Miss., Charleston—(Road).—Suprs. Dist. No. 3, Tallahatchie County, votes August 2 on \$30,000 of bonds. J. A. Shores, Pres., and D. S. Henderson, Clerk Board of County Suprs.

Miss., Charleston—(School).—Tallahatchie County Suprs., D. S. Henderson, Clerk, give notice that at their August 5 meeting they propose to issue \$12,000 of bonds for agricultural high school.

Miss., Corinth—(Funding).—Alcorn County has sold at \$95.50 premium to J. C. Mayer & Co., New York, \$15,000 of 5½ per cent. \$1000 denomination bonds for funding outstanding county warrants.

Miss., Meridian—(School).—Vinville School District, Lauderdale County, \$5000 bonds issue defeated June 25.

Miss., Meridian—(School).—Concord Consolidated School District, Lauderdale County,

\$5500 bond issue is voted and will probably be offered August 6. Address County Suprs., W. R. Pistole, Clerk.

Miss., Meridian—(Highway).—Lauderdale County, W. R. Pistole, Clerk Supervisors, has sold to J. A. Pigford, Russell, Miss., at \$1500 premium, interest and expenses \$20,000 of 6 per cent. bonds District No. 2.

Miss., Quitman—(School).—Carmichael School District, Clark County, has sold to J. A. Pigford, Meridian, \$4500 of bonds. Address County Comms.

Miss., Yazoo City (County Bonds).—Yazoo County Suprs., S. S. Griffin, Clk., has sold to Silverman, Huyek & Co., Cincinnati, at par, accrued interest and \$1,042.50 premium, \$75,000 of 5½ per cent. bonds.

Mo., Fayette—(Road).—Howard County will soon vote on \$700,000 of bonds. Address County Comms.

Mo., Lebanon—(Road).—Laclede County is planning to hold an election to vote on \$450,000 bonds. Address County Comms.

Mo., Liberty—(Road).—Clay County Court has voted to issue \$90,000 of bonds. Address County Comms.

N. C., Clinton—(Street).—City asks bids until noon July 15 for \$41,900 of 6 per cent. \$500 denomination bonds, dated July 1, 1918; maturity 1919 to 1928, inclusive. Henry A. James, Town Clerk and Treas.

N. C., Durham—(Water).—City Aldermen voted to issue \$100,000 of water bonds to pay off a loan obtained last year, and bids for same will be opened at 2 o'clock August 20, delivery to be made August 27. Address The Mayor.

N. C., Greensboro—(School).—City plans to vote on \$400,000 of bonds. It will be some weeks before arrangements are completed. J. Norman Wills, Chrmn. Board of Education.

N. C., Jackson—(County).—Northampton County Comms., S. J. Calvert, Clk., asks bids until noon Aug. 5 for \$50,000 of 6 per cent. 5-28-year \$1000 denomination bonds. Oconeechee Township.

Okla., Cleveland—(Paving).—City is reported to have sold to the Hanchett Bond Co., Chicago, \$15,500 of 6 per cent. \$100 and \$500 denomination paving district bonds, dated May 21, 1918; maturity 1921 to 1928, inclusive.

Okla., Tulsa—(Road).—Tulsa County has had approved by Atty. Gen. \$1,750,000 of bonds. Address County Comms.

Okla., Newkirk—(School).—Newkirk School District, Kay County, will probably vote on \$15,000 bonds. Address Board of Education.

Okla., Oklahoma City—City has sold at par and interest \$200,000 of 5 per cent. Oklahoma City School District bonds. Dated June 1, 1918; maturity June 1, 1922, to 1926, inclusive.

Okla., Ryan—City is reported to have sold \$16,000 of 6 per cent. 20-year bonds. Address The Mayor.

Okla., Yale—(Light, Water).—City asks bids until July 20 for \$200,000 of 6 per cent. 10-20-year bonds. G. H. Roff, City Clerk.

Okla., Yale—(Light, Water).—City has not yet set date for holding election to vote on \$230,000 of 6 per cent. 20-year \$1000 denomination bonds; Ben Monett, Mayor. Press reports state bids for \$200,000 of the proposed issue are asked until July 20.

Okla., Cheyenne—(Funding).—Rogers County has sold to G. W. and J. E. Piersol Co., Oklahoma City, \$31,150 of 6 per cent. \$1000 denomination bonds; dated Jan. 1, 1918; maturity 1943.

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S. C., Bishopville—(School).—Lee County School District No. 7 has sold to Hanchett Bond Co., Chicago, \$4900 of 6 per cent. \$1000 denomination bonds Lee County School District No. 7; dated May 22, 1918.

S. C., Greenville—(Water).—City has voted \$800,000 to purchase plant of Paris Mountain Water Co. and \$200,000 to enlarge and improve same. H. C. Harvey is Mayor.

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Tenn., Chattanooga—(Paving).—City asks bids until 10 A. M. July 13 for the following 6 per cent. 1-4-year paving bonds: \$2695-16 Dist. No. 210: \$532.76 Dist. No. 207: \$2,397-32 Dist. 208: \$106.64 Dist. 209: \$551.04 Dist. 212. Dated June 1, 1918. Jesse M. Littleton, Mayor.

Tenn., Jacksboro—(Highway).—Campbell County, J. F. Cooper, Clerk, on June 29 sold at par to Caldwell & Company, Nashville, \$100,000 of 5 per cent. 30-year \$500 denomination bonds.

Tenn., Oneida—(Street).—City will receive bids until 11 A. M. July 17 by G. K. Young, Chrmn., for \$20,000 of 6 per cent. street improvement bonds.

Tex., Alto—(School).—Alto Independent School Dist. has had approved by Atty-

Genl. \$20,000 of 5 per cent. 40-year bonds. Address School Board.

Tex., Austin—(Sewer).—City will sell at noon July 1 \$100,000 of 5 per cent. \$1000 denomination bonds. A. P. Wooldridge, Mayor.

Tex., Blythe—(Water).—City plans to vote on \$35,000 municipal water-system bonds. Address The Mayor.

Tex., Breckenridge—(Road).—Stephens County, Jesse R. Smith, Judge, defeated \$500,000 of 5 per cent. 30-year \$1000 denomination bonds.

Tex., Coleman—(School).—Coleman County has had approved by Atty-Gen. \$10,000 of 5 per cent. 10-40-year Talpa Independent School District bonds. Address County Commrs.

Tex., Colorado—(Road).—District 2, Colorado County, voted \$100,000 bonds. Address County Commrs.

Tex., Comanche—(Highway).—Comanche County has voted \$150,000 bonds Highway No. 10. Address County Commrs.

Tex., Crockett—(Road).—District 8, Houston County, voted \$50,000 bonds. Address County Commrs.

Tex., Dallas—(School).—Board of Education will, it is reported, sell \$440,000 of 4 per cent. bonds.

Tex., Decatur—(Road).—Wise County has had approved by Atty-Gen. \$80,000 of 5½ per cent. bonds Road District No. 1. Address County Commrs.

Tex., Dickens—(School).—Dickens County has had approved by Atty-Gen. \$3400 of 5 per cent. 5-20-year bonds Common School Dist. 3. Address County Commrs.

Tex., Electra—(Sewer).—City has had approved by Atty-Gen. \$45,000 of 5 per cent. bonds. Address The Mayor.

Tex., Gainesville—(Road).—Cooke County will probably soon vote on bonds. Address County Commrs.

Tex., Gonzales—(Road).—Gonzales County, J. C. Romberg, Judge, has sold at par and interest, less \$2295, \$120,000 of 5½ per cent. 1-30-year \$1000 denomination bonds Road Districts 1 and 3 to C. N. McNear & Co., Chicago, and Mercantile Trust Co. and the Kaufman-Smith-Emert Co., St. Louis.

Tex., Graham—(Road).—Young County election, ordered for June 15 to vote on \$350,000 of bonds, postponed until war is over. W. P. Stinson, Judge.

Tex., Hamilton—(School).—Hamilton County has had approved by Atty-Gen. \$8000 of 5 per cent. 20-year bonds Common School Dist. 42. Address County Commrs.

Tex., Houston—(Refunding).—City has sold to Sinking Fund \$708,000 of 4½ per cent. 1-30-year \$1000 denomination bonds, dated July 1, 1918. R. Morgan is City Secy.

Tex., Lufkin—(School).—Angelina County has had approved by Atty-Gen. the following bonds: \$1200 of 5 per cent. 5-10-year Dist. 13; \$1500 of 5 per cent. 10-20-year Dist. 48; \$1300 of 5 per cent. 5-10-year Dist. 14; \$3000 of 5 per cent. 10-20-year Dist. 14; \$1500 of 5 per cent. 10-20-year Dist. 14; \$1500 of 5 per cent. 10-20-year Dist. 14. Address County Commrs.

Tex., Mineral Wells—(Water).—City has had approved by Atty-Gen. \$35,000 of 4 per cent. 20-40-year bonds. Address The Mayor.

Tex., Paducah—(Road).—District 2, Crockett County, has voted \$100,000 of bonds. Address County Commrs.

Tex., San Diego—(Indebtedness Warrants).—Duval County has sold to J. L. Arlitt, Atty-Gen. \$35,000 of 6 per cent. 1-9-year floating indebtedness warrants, dated June 10, 1918. Denomination \$1000. Address County Commissioners.

Tex., Waxahachie—(Road).—Ellis County has voted \$80,000 of 5 per cent. \$1000 denomination bonds Good Road Dist. 12; dated June 1, 1918; maturity \$3000 per year for 20 years then \$2000 per year. W. M. Tidwell, County Judge.

Va., Richmond—(Funding).—City sold July 2, at 103.08, to Hambleton & Co., Baltimore, \$500,000 of 6 per cent. bonds. Barton H. Grundy, Chrmn. Finance Committee.

W. Va., Marlinton—(Water, Light, etc.).—Town will receive bids until 8 P. M. July 5 for \$10,000 of 6 per cent. \$500 denomination bonds, dated July 1, 1918, and maturing two bonds Jan. 1, 1929, and two each year thereafter until issue is retired. J. W. Milligan, Mayor.

FINANCIAL NOTES

Bank of Poplar Bluff, Poplar Bluff, Mo., increased capital \$100,000 to \$150,000.

Charlotte Morris Plan Bank, Charlotte, N. C., increased capital from \$50,000 to \$75,000.

Winchester State Bank, Winchester, Tex., increased capital from \$12,500 to \$15,000.

National Bank of Commerce, Louisville, Ky., increased capital from \$800,000 to \$1,000,000.

A. B. Leach & Co., Inc., and R. W. Prepprich & Co. are offering \$500,000 State of Mississippi serial 5½ per cent. bonds, dated April 1, 1918, and maturing April 1, 1929 to 1934, callable at par Oct. 1, 1923, or any interest date thereafter.

INDUSTRIAL NEWS OF INTEREST

(Continued from page 77.)

Crescent Trucks.

The Crescent Truck Co. of Elizabeth, N. J., has purchased from the Bethlehem Shipbuilding Corporation, Moore plant, all rights, title and interest in the Crescent electric industrial truck, and is now manufacturing a full line of storage battery trucks and tractors for either freight, industrial or baggage service. One of the company's products to which it is directing particular attention is the Type F, a "four-wheel steer" electric industrial truck, which is illustrated and described in a special bulletin (No. 104) now being distributed. These trucks are claimed to be great labor savers, and their especial advantages in this way are expected to be much appreciated now that labor is scarce and its cost high. It is stated that one of these trucks will do the work formerly done by twelve men with hand trucks, and also that it will "take" a 15 to 25 per cent. grade. The manufacturers give a full description of the equipment of the trucks, including bearings of the best makes and other features of equal high quality.

TRADE LITERATURE

Electricity in Cane Sugar Manufacture.

The General Electric Co. has prepared for distribution Bulletin No. 48024, entitled "Electricity in the Cane Sugar Industry," describing the advantages derived from the application of electrical apparatus, in cane sugar mills and showing how the use of electricity has produced definite savings in the cost of labor, fuel, supplies and repairs. The savings given are based on data and Government cost figures. This bulletin contains many interesting and instructive illustrations of G-E installations in Cuba, Porto Rico, Mexico and other cane-growing countries.

Frankel Connectors.

A catalog and price list of the Frankel solderless connectors has been issued by the Frankel Connector Co., Inc., New York, for which the Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., is sole distributor. Offices and works are at Hudson and Vestry streets, and the salesrooms at 77 and 735 Broadway, New York. These connectors are used with either stranded or solid wires and the company also makes electric testing clips and spark plugs. It is claimed that these splicing sleeves, connectors and terminals eliminate entirely the use of solder and make a perfect mechanical and electrical joint more economically, time and material considered. The book is finely printed and the figures and illustrations are plain, clear and distinct.

Motor Road Rollers.

A handsome and large catalog devoted to descriptions and illustrations of the Austin motor road rollers for gasoline, kerosene or distillate has been issued by the Austin Manufacturing Co., Chicago. It says that this roller has come to be so widely used during the last 10 years that it is now a familiar piece of road equipment in most parts of the world. Besides hundreds used in the United States, they are also used in large numbers in different countries of South America, Europe, Asia and Africa, as well as in Canada, Mexico and other lands on this continent. It is stated that the use of kerosene instead of gasoline in these road rollers has proved entirely satisfactory, and this has broadened their scope of usefulness by a further reduction of operating costs, rolling expenses being reduced 50 per cent., or in some cases even more. The catalog is fully and richly illustrated, and the descriptive matter is complete and informing to every detail.

CONDENSED REPORT TO COMPTROLLER The First National Bank OF BIRMINGHAM, ALA.

ALABAMA'S FIRST MILLION-DOLLAR BANK

STATEMENT JUNE 30, 1918

RESOURCES	LIABILITIES
Loans and Discounts.....\$10,759,111.45	Capital Stock.....\$ 1,500,000.00
Overdrafts.....431.68	Surplus and Profits..... 1,568,213.01
U. S. Bonds (par)..... 1,500,000.00	Reserved for Taxes..... 25,140.00
U. S. Treasury Certificates..... 1,984,071.50	Circulation..... 1,400,000.00
Liberty Loan Bonds..... 1,704,450.00	Dividends Unpaid..... 45,000.00
State of Alabama Bonds..... 127,000.00	
Stock in Fed. Reserve Bk.. 90,000.00	
Other Stocks and Bonds... 1,338,551.19	
Banking House..... 391,000.00	
Other Real Estate..... 41,405.90	
CASH	
In Vault.....\$ 914,959.34	
With Banks. 6,325,845.89	
With U. S. Treasurer. 102,000.00	
Federal Reserve Bank 1,887,571.02	
\$ 9,230,376.25	\$22,628,044.46
\$27,166,397.97	\$27,166,397.97

OFFICERS

J. H. BARR, Chairman
OSCAR WELLS, President THOMAS HOPKINS, Cashier
J. H. WOODWARD, Vice-President F. S. FOSTER, Assistant Cashier
J. K. FLEMING, Vice-President THOMAS BOWRON, Assistant Cashier
J. E. OZBURN, Secretary Savings Department
J. L. CROSS, Auditor

PARTICULAR ATTENTION GIVEN TO COLLECTIONS
DIRECT CONNECTIONS AT ALL ALABAMA POINTS

Why Are the Largest Corporations Buying the Barrett Adding, Listing and Calculating Machine?



- Some buy it because it has a 12-dial capacity.
- Some buy it because it has right-hand control.
- Some buy it because it is noiseless in operation.
- Others like the standard flexible keyboard of 81 keys.
- Others insist on the Barrett because it furnishes a printed proof of all figures in multiplication and division.

—Many are attracted by the price, but—

Everyone buys it because it is a portable desk machine—simple to operate and can be carried to the work.

The smallest concerns buy it because they secure an adding and listing machine and an efficient calculating machine for only \$250.00

Send for List of 1,000 Prominent Users.

Barrett Adding Machine Co.
Bulletin Building Philadelphia, Pa.



Ninety heavy trucks made the trip from Camp McClellan, Ala., to Atlanta, Ga., a distance of 125 miles, and carried back 130 tons of sugar for the soldiers in camp. (Central News)



Military trucks and the new commercial truck-trains need Tarvia roads. (Photos courtesy Leslie's Weekly and Commercial Photo Shop.)

General Goethals says we need more Good Roads—

"General Goethals, who resigned as State Engineer of New Jersey when he was appointed Army Quartermaster-General, with direction of transportation, has recommended to the State Highway Commission that it spend all its available funds this year in building sections of roads that will enable the army to use motor trucks and other vehicles to relieve the railroad congestion in hauling supplies to its camps and to the shipping bases. His report lists fourteen routes where immediate changes might be made to facilitate army transportation with trucks.

"All the recommendations have been accepted, and the first year's levy of the direct tax that, it is estimated, will total \$15,000,000 in five years, will be spent in improving military highways. Four of the routes carry traffic to New York, although the plans for improvements on all routes are intended to increase highway traffic to other ports. Other improvements affect the traffic on highways between Newark, New York, and the Quartermaster depots in Philadelphia, and all the manufacturing plants between those cities. Better roads to Sandy Hook, the United States naval station at Cape May, and Camps Dix and Merritt are suggested."

—From *The New York Times*.

Every State, every county, has its long through routes that *should* carry a swarming traffic of motor-trucks!

But one impassable mile, one neglectful township somewhere on the route from city to city, breaks the chain and forces shippers to use congested railroads as best they can!

Roads must be strengthened to withstand motor-truck traffic. This means that in most cases they should be built or treated with Tarvia, which reinforces the road-surface and makes it smooth, dustless and durable.

Tarvia has been successfully used on thousands of miles of roadway throughout this country, including many of the principal arteries of the nation.

No other road material is so popular.

Every State highway commission, every county and township authority, every citizen, should be interested in the good-road problem, which is so urgent if the nation is to mobilize promptly its food and its fuel, its munitions and its men.

Good Roads and plenty of them will help us win the war.

Tarvia

Preserves Roads-Prevents Dust

New York Chicago Philadelphia
Cleveland Cincinnati Pittsburgh
Kansas City Minneapolis Nashville

The *Barrett* Company

Boston St. Louis
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THE BARRETT COMPANY, LIMITED:

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Halifax, N. S.

Sydney, N. S.



Classified Opportunities

MINERAL AND TIMBER LANDS WATER POWERS MISCELLANEOUS PROPERTIES

FOR GOOD VALUES in Virginia blue grass or general purpose farms, coal and timber lands, and Roanoke City and suburban property, factory sites particularly, address Ellis L. Wright, 313 South Jefferson Street, Roanoke, Va.

MANGANESE AND OTHER MINERALS on 190 acres land; railroad through center; partially developed; analysis 48 to 53 per cent. Please do not answer unless you have the money and mean business. Price \$3000; one-half when satisfied it is O. K. J. C. Clay, Gladys, Va.

FOR SALE—300 acres in fee, 4 miles from C. & O. Railroad in Alleghany County, Virginia. Iron ore and barry of high quality. For further information and price address W. C. Ross, Altavista, Va.

NATURAL GAS. We are in position to contract for the delivery of unlimited quantities of natural gas for manufacturing carbon black and gasoline or for fuel for manufacturing plants. Monroe field.

Correspondence solicited.
MILLSAP, OLIVER & MONTGOMERY,
Lawyers, Monroe, La.

1700 ACRES table land, 1200 level, in coal district, underlaid with coal; 2,000,000 feet saw timber; soil sandy loam with clay subsoil; plenty running water; adapted to grain, grass and clover; would make fine stock ranch. \$6 acre. Graham Hale, Rising Fawn, Ga.

MINERAL LAND WANTED

WANTED—To hear from parties owning any kind of mineral property.
UNITED MINERALS CO.,
ROANOKE, VA.

WATER-POWER

A WATER POWER, fully surveyed, of between 8000 and 10,000 H. P. on a river with ores and minerals convenient, which are adapted for products in munitions manufacture, near a city in a Southern State, is for sale. It can be bought at a reasonable price for cash immediate. Address No. 5136, care Manufacturers Record, Baltimore, Md.

FIRE-CLAY LAND

FOR SALE—Large tract of fire-clay land in Southern Pennsylvania. Well-known vein, hard and set clay; also 1000 ft. of railroad facilities. Address No. 5136, care Manufacturers Record, Baltimore, Md.

PHOSPHATE ROCK

FOR SALE—Two million tons of blue rock phosphate in the ground near Mt. Pleasant, Tenn., running from 53 to 72 per cent. bone phosphate of lime; spur of the L. & N. R. R. runs through it; locating the Government nitrate plant at Muscle Shoals, Ala., makes the property more valuable; Muscle Shoals is only 60 miles from Mt. Pleasant. Major W. N. Hughes, U. S. A., 523 1/2 Broadway, Nashville, Tenn.

MANGANESE ORE LANDS WANTED

IF YOU have high-grade manganese ore in the Southern Appalachian section, and are willing to let the operator make part of the money, write full particulars to No. 5074, care Manufacturers Record, Balto., Md.

MANGANESE ORE LANDS

760 ACRES MANGANESE ORE LANDS for sale; engineer's estimate, 500,000 tons; railroad one mile; now mining with pick and shovel; analysis and records available. Address Donk Aydelott, Tullahoma, Tenn.

COAL LANDS AND MINES

KENTUCKY GAS & BY-PRODUCT COAL. Operating mines, Harlan & Hazard. Fields, sold to consumers of Central West. Low sulphur and ash, especially suited for malleable-iron producers. Consumers can assure themselves of uniform quality and desired quantity. Agent also for virgin coal lands. Reference—any Louisville bank. Upon request will be pleased to refer to large consumers whom I have located in this territory.

J. STODDARD JOHNSTON

PAUL JONES BUILDING,

LOUISVILLE, KY.

COAL MINE FOR SALE, with electrical equipment and 24,000 acres of good coal land, on which is much valuable timber and two mills; near the Southern Railway, in Alabama, 66 miles westerly from Chatsanooga, Tenn. Bon Air seam, 40 inches thick, of high grade for domestic use or as steam coal; good markets and reasonable freight rates covering a large territory. For sale cheap to close an estate. For full particulars address F. D. Pierce, Bridgeport, Ala.

FOR SALE—Clearfield, Pa.; 300 acres, 100 tons daily, best coal, \$25.00; Maryland, 800 acres, 400 tons daily, \$150.00; Pocahontas mine loading on N. & W. 140,000 tons, \$18.00 in fee. Mine output contracted in advance. Leo Ranney, 1 Madison Ave., New York City.

RATES AND CONDITIONS

Rate 25 cents per line per insertion. Minimum space accepted, four lines. In estimating the cost, allow seven words of ordinary length to a line. When the advertisement contains a number of long words, proper allowance should be made. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year as follows: 100 lines, 23c. per line; 300 lines, 21c. per line; 500 lines or more, 20c. per line.

COAL AND TIMBER LAND

FOR SALE—Bargain: 90,000 acres Tennessee coal and timber land in parcels of 5000 to 10,000 acres, together, \$3.00 to \$10.00 per acre; part on railroad, part fine virgin timber; good titles; exposures of highest grade coking coal. Owned by estates. E. H. Bendolst, 1921 Boatmen's Bank, St. Louis, Mo.

50,000 ACRES Tennessee coal and timber lands, located in Lincoln, Franklin and Coffee counties; must sell to settle partnership. Price \$2.50 per acre; \$15,000 cash, balance on ten equal annual payments. Would accept exchange property to the amount of one-half. T. N. Figueres, Jr., Columbia, Tenn.

LOANS ON TIMBER LANDS

SALES NEGOTIATED. Check Estimates for Loans on Timber Lands. Consulting Forester and Timber Land Factor. 25 Years' Experience All Parts of Country. F. R. MEIER, New York, N. Y.

TIMBER OPERATION

ABOUT one hundred million feet standing timber, short-leaf pine, in North Carolina; well located. Can also furnish equipment, including rail, locomotives, skidders, team, sawmill, planing mill and drykiln equipment, in splendid condition. William P. Redd, 30 North Ninth St., Richmond, Va.

TIMBER LAND

60,000-ACRE TIMBER TRACT, the best one left; will cut 250,000,000 feet V. L. L. yellow pine lumber. At \$2.50 stumpage, the timber will pay for land, timber and all, and it is worth twice this price. All fine, rich land, in good, general farming section, trucking and stock raising also, and would make the best sugar plantation in all the United States. Buy this and make your millions. Price \$10 per acre. W. J. Norris, 513 Empire Bldg., Atlanta, Ga.

5500 ACRES Smoky Mountain timber. Southern Railway and Little Tennessee River through middle of the property. Creeks, ravines, general store, postoffice and houses make operation easy. 34,000,000 feet estimated. Best cash offer takes it. Southern State Co., Columbus, Ohio.

TIMBER

FOR SALE—Fifty million feet of fine South Carolina timber, consisting of thirty-nine million feet red gum, five million oak, three million cypress, three million short-leaf pine. This timber is very large and of fine quality; easily logged at any time of the year. Price reasonable. Accessible to railroads. Will bear closest investigation. Address No. 5033, care Manufacturers Record.

FOR SALE—Virgin timber off of 19,000 acres of land, 60 per cent. white oak, 40 per cent. chestnut oak, red oak, poplar, hemlock and hickory. Cruised 5000 feet merchantable timber to the acre. Timber near railroad, and a good logging proposition. This is one of the finest tracts of timber in Eastern Kentucky. Price is \$3 per thousand. If you want to buy or sell any size tract of timber or coal land, write me. C. G. Purdon, 117 S. Fifth St., Louisville, Ky.

EIGHT TO TEN MILLION FEET 10-inch and over heart slash, cypress and gum; 30 miles to port and between two railroads. Two dollars stumpage, and no estimate or charge stuff smaller than 10 inches. Leases run four to ten years. Additional stumpage adjacent. Just put on market. W. R. Morrison, 9 Whitaker St., Savannah, Ga.

2,000,000 FEET TIMBER, 1/4 mixed oak, balance pine; five miles from R. R. Price, \$11.000. 5,000,000 feet; 1,000,000 original yellow pine, 1,000,000 mixed oak, 3,000,000 second-growth pine; 250,000 feet poplar. 15 miles R. R. Price, \$29,000. J. C. Clay, Gladys, Va.

FARM AND TIMBER LANDS

COME TO THE SUNNY SOUTH, the Good Old State of Texas, where you have a warm climate in the winter, and buy you a home where land is as good as the land that sells in the State of Illinois for \$250 per acre, for only \$30. I have 4400 acres of land, 10 miles of railroad station, 16 tenant houses on it, one gin plant that cost \$7500, one thousand acres in cultivation, the balance virgin timber, hardwood, which can be put into cultivation. This soil will grow anything that will grow anywhere in the rain belt of Texas. Located where we never have crop failure. Price of land \$30 per acre. Rents from the place paid in 1917, \$20,000. Have several small farms from 125 acres up. For further information, address R. F. Easterwood, Athens, Texas, Box 322.

FARM AND TIMBER LANDS

WE OWN LARGE TRACTS OF TIMBER LANDS, cut-over lands and colonizing lands. If interested, address H. H. Wefel, Jr., & Co., Mobile, Alabama.

FRUIT, FARM AND TRUCK LANDS

THESE COLUMNS ARE CLOSELY READ BY PEOPLE for information of all kinds about Southern properties of every description. If you have a property of any kind that you want to dispose of, try an advertisement in these columns. Others have to their advantage. For rates see head of department.

ALABAMA

FOR SALE—Southern black land hay farm, consisting of 388 acres, seven miles out of Montgomery, Ala., on gravelled road. Wire fence all around place. Nice six-room bungalow with bath, water-works, etc., facing the road. Price only \$80 acre, including dwelling. One hundred twenty acres fine cotton and corn land, just four miles north of Montgomery on gravelled road. Price \$75 acre. Two hundred and fifty acres, located six miles west of Montgomery, Ala., and known as creek lands; suitable for cotton, corn, etc. Price \$40 acre.

We will be glad to give further details on request. Duskin & Stewart Realty Co., 612 Dexter Avenue, Montgomery, Ala.

FLORIDA

A BEAUTIFUL WINTER HOME, a profitable orange and grapefruit grove, a general farm, cattle, hog or poultry ranch in the famous Indian River section, Vero, Florida. The wonderful climate permits not only agricultural operations all the year, but all enjoyable, life-prolonging, outdoor sports. Investigate now this wonderfully charming section. Indian River Farms Company, First National Bank Building, Vero, Florida.

CATTLE LANDS.

200,000 acres of land along the Miami Canal in that vast, rich empire, The Everglades of Florida, on which the State is now spending millions, deepening and widening the Miami Canal to 50 feet wide and 15 feet deep, thereby furnishing drainage and irrigation; also inland water transportation connecting with deep water at Miami. No clearing to be done. Free from cattle tick. Acre for acre, the Everglades will produce more cattle and hog feed than elsewhere in America. Our largest sales have been to actual developers. This is the cream of the "Glades." Buy from owners. Tatum Land Company, Miami, Fla.

WANTED—A buyer for half interest in 80 acres within the city limits of Miami, Fla. (the Magic City of the South). I will spend dollar for dollar on improvements with the purchaser. I prefer an active partner during the winter at least. Address J. H. Meyer, Owner, Miami, Fla.

EVERGLADE LANDS — Canal drained, ready for plow, 10 feet muck. Section lots \$20 up. Palm Beach or Lee County. Cattle lands, \$5. Sadler, Fort Myers, Fla.

FARM FOR SALE—146 acres, 100 acres now in crop; cotton, corn, Jap-cane, sugarcane, peanuts, velvet beans, castor beans, cassava, peavine hay; 3 mares, 1 horse, 1 cow, calf, chickens, hogs, all farm machinery, silo, ensilage cutter, 2 gas engines; good well, house, barn, etc.; half mile from Sorrento, Lake County, Fla. Crops will bring 20 per cent. or more on asking price. Terms, C. E. Riddle, 901 Florida Ave., Tampa, Fla.

MISSISSIPPI

MISSISSIPPI STOCK FARMS. I have about 20 fine stock farms for sale in tracts of 160 to 1500 acres, with an abundance of natural grasses and ever-flowing water on each, about 15 of each place in high state of cultivation, good roads, schools and neighbors. I believe I have the best lands in the South at the price. Prices ranging from \$10 to \$30 per acre. Write J. L. Harris, Atty., Water Valley, Miss.

TENNESSEE

600 ACRES FINE BOTTOM LAND, canal drained; 75 acres in cultivation, balance cut-over; two deep wells; three houses and barn, touching Southern Ry. two miles east of Middleton, Tenn., and 20 miles west of Corinth, Miss., on Memphis-to-Corinth Highway. \$30 an acre; terms, T. H. Wilson, Forest, Miss.

VIRGINIA

FOR SALE—Bearing orchard, about 100 trees, 20 years old, principally Winesap, 10 acres; concrete dwelling, one-half mile from city, two trunk-line railways. E. C. Vance, Staunton, Va.

FOR SALE—100 acres fine orchard land with 700 bearing trees.
LIBERTY REALTY CO.,
ROANOKE, VA.

BUSINESS OPPORTUNITIES

FARMING OPPORTUNITIES AND INDUSTRIAL SITES along the Winston-Salem Southbound Rwy. Co. Here climate, transportation, good roads, fine schools and excellent markets contribute to the success of farming, and the large and prosperous industrial centers along our lines offer splendid locations for industries of various kinds. Address S. P. Collier, Jr., Winston-Salem, N. C.

CHEMICAL LABORATORY. We are offering for sale the chemical laboratory of the late Frank P. Drane of the city of Charlotte, North Carolina. This laboratory is well equipped for assaying and for testing of cements and asphalt, as well as for general chemical research. A complete list of the inventory will be mailed to interested parties.

AMERICAN TRUST COMPANY, Administrator of Frank P. Drane, deceased, Charlotte, N. C.

WE offer for sale our complete property, including asbestos mine, machinery for grinding, etc.; a bargain to anyone who understands manufacturing pipe covering and packing and paints. Will sell all or a part of it on reasonable terms. Asbestos Mining & Mfg. Co., Stony Point, N. C.

HUSTLER, 32, married, wants partnership in or will purchase established business in growing Southern or Western city or large town. Am a practical construction man, now in the second-hand machinery, machinery supplies and hardware line, and willing to enter into similar business, preferably combined with contracting where my technical knowledge and business experience can be used to develop the enterprise. Moderate capital, but plenty of energy and tenacity. Address 5128, care of Manufacturers Record.

FOR SALE—Mill site Southeastern Arkansas, situated on river. Machinery, buildings and logging equipment. Ideal location for saw mill. Good labor conditions. Address No. 5117, care Manufacturers Record.

BUILDINGS FINANCED. If you intend to build a large, modern factory, warehouse, hotel, terminal or other concrete fireproof building, we have clients who will furnish plans and specifications and finance and construct ready for occupancy. Have built several and are just completing a large concrete terminal. Satisfactory bond furnished. Address Ed L. Walker & Co., 519 Madison Avenue, Corington, Kentucky.

WANTED—Responsible party to log and saw million feet of lumber; will pay a good price. Liberty Lumber Yard, Roanoke, Va.

I OFFER one-half interest in a retail lumber yard, located in one of the most progressive cities in the South, where there is a large number of the biggest Government operations in the country. Full particulars on application. Address No. 6001, care Manufacturers Record, Baltimore, Md.

PARTNER OR PARTNERS WANTED with \$50,000 capital to become active in automobile, garage, accessory and repair business. Absolutely no one considered unless they can become active in the business. Now doing over \$300,000 annually; can easily be increased to million-dollar business; continue most valuable of all auto agencies. Own best of property and splendidly equipped garage and shop. Well advertised and known everywhere. Reason for selling interest, principal owner died and estate wants settlement. Nothing but bona fide principals need apply. Address No. 5137, care Manufacturers Record.

WE SELL THE BEST DRAG SAW MACHINES on the market. Complete with oil and gasoline, four horse-power engine attached to drive it, and will cut 20 cords of wood per day. Price \$175. Also the best auto truck on earth; adapted to haul lumber and wood. Also a fine young orange grove and 5000 acres of farm land below the fruit-line in the most fertile section in Florida. Thomas Camp, 37 Norcross St., Atlanta, Ga.

CITY OFFICE BUILDING, always rented, big income; value \$1,500,000; Mtg. \$625,000; 17 years—exchange for free and clear timber tract; must stand loan \$200,000. Address No. 5135, care Manufacturers Record, Balto., Md.

WE CAN SELL YOUR BUSINESS for cash, no matter where located; no publicity. Describe fully in first letter. All correspondence confidential. Herbert, Webster Bldg., Chicago.

WANTED—Either to sell or contract for manufacturing of a large tract of standing timber in Charlotte Co., Virginia. Address A. L. Shepherd Lumber Co., Richmond, Va.

Classified Opportunities

STORAGE SPACE

WANTED—To correspond with parties desiring storage for peanuts or general merchandise at Norfolk-Portsmouth. Address No. 333, care Manufacturers Record, Balto., Md.

GOVERNMENT CONTRACTS

REPRESENTATION before Congress, all Courts, Government Boards and Departments. We specialize in daily reporting Government requirements. Expert attention to Government bidders and contractors everywhere. U. S. Legal Corporation, 1403 H. St. N. W., Washington, D. C.

BUILDINGS—STEEL PORTABLE

"PRUDENTIAL" STEEL BUILDINGS for all purposes; portable one-story construction; workshops, toolhouses, storage, garages, bunkhouses, etc. Write for Catalog A. C. D. Prudden Company, Baltimore, Md.

INCORPORATING COMPANIES

DELAWARE CHARTERS. Stock Without Par Value. Directors Need Not Be Stockholders. Other important amendments (March 20, 1917) Write for new DIGEST (4th ed.). **CORPORATION COMPANY OF DELAWARE.** Equitable Building, Wilmington, Delaware.

TRADE ACCEPTANCES

"Trade Acceptance" forms supplied. Request sample. Commercial Form Co., Passaic, N. J.

NEWSPAPERS

FREE FLORIDA TRAVELERS MAP—We send this two-colored Florida map showing automobile roads and other valuable information free with each yearly subscription for Florida City News. Enclose 25c coin or stamps. Write name plainly. Clip this and mail to Miami Land & Development Co., Miami, Florida, P. O. Box 35.

PATENT ATTORNEYS

PATENT YOUR IDEAS.—\$9900 offered for certain inventions; book, "How to Obtain a Patent," and "What to Invent," sent free upon request; send rough sketch for free report as to patentability. We advertise your patent for sale at our expense. Chandler & Chandler, Patent Attorneys, 978 F St., Washington, D. C.

PATENTS, TRADE-MARKS AND COPYRIGHTS.—Write for list of patent buyers and inventions wanted. \$1,000,000 in prizes offered for inventions. Send sketch for free opinion as to patentability. Our four books sent free. We assist inventors to sell their inventions. Victor J. Evans Co., Patent Attorneys, 712 Ninth St., Washington, D. C.

POSTAL will bring free booklet telling all about patents and their cost. Shepherd & Campbell, Patent and Trade-Mark Attorneys, 722 8th St., Washington, D. C.

PATENTS AND TRADEMARKS Procured by a former Examining Official of the U. S. Patent Office. **NORMAN T. WHITAKER,** Attorney-at-Law, Mechanical Engineer, 180 Whitaker Bldg., Washington, D. C. Inquiries Invited.

PATENTS THAT PROTECT AND PAY. Advice and books free. Highest references. Best results. Promptness assured. Trade-Marks registered. **Watson E. Coleman, Patent Lawyer,** 624 F St., Washington, D. C.

INDUSTRIES WANTED

POUGHKEEPSIE, NEW YORK, offers to iron or steel industries engaged in United States Government work splendid opportunity for Eastern Seaboard location. Several plants adequate to meet demands of iron or steel work available; skilled labor guaranteed; banking facilities above average; unlimited electric power with graduated scale; New York Central and Central New England railroads; bridge connection over Hudson with West; river transportation to New York. Write Chamber of Commerce for complete data.

LAUNDRY

WANTED—Some competent and reliable individual or firm to come to Union, S. C., and open a laundry with capacity to do all classes of laundry work. No laundry here. Several small towns within 10-mile radius. Available population for solicitation about 29,000. Address Union County Chamber of Commerce, P. O. Box 296, Union, S. C.

FACTORY SITES

BALTIMORE FACTORY AND TERMINAL SITES.—Statement of Asa G. Candler, President The Coca-Cola Co.: "Investigation convinced us that Baltimore is not only the commercial metropolis for Southern trade, but that it affords shipping opportunities both by water and rail for domestic and foreign traffic superior to any of the great cities in any section of the United States." Locate in Baltimore and derive these advantages. We can provide accommodations to meet your requirements.

"OUR MOTTO": **FACTORY AND TERMINAL SITES IN BALTIMORE.** Wm. B. Martien & Co., Ninth Floor, Lexington St. Bldg., Balto., Md.

FREE FACTORY SITES.—On deep, navigable river, near deep-water port; also on trunk-line railroad; good health, cheap labor, cheap coal, flowing artesian wells, cheap timber. Woodbine Development Co., Woodbine, Georgia.

FOR SALE.—Fine factory sites, railroad frontage, abundance of water, electric power, street-car facilities; will sell from 1 acre up to 200 acres. Factory Locators, Roanoke, Va.

INDUSTRIAL PLANTS FOR SALE

EXCELSIOR AND MATTRESS FACTORY

FOR SALE.—Excelsior and mattress factory; machinery and building in first-class shape. Sheet-iron building located at Atlantic Coast Line R. R. Wonderful opportunity. Southern Mfg. Co., Myers P. O., Charleston, South Carolina.

VENEER MILL

FOR SALE.—Complete veneer mill, situated on river Southeastern Arkansas in good timber district. Machinery in first-class condition; good labor conditions. Address No. 5116, care Manufacturers Record, Balto., Md.

MANUFACTURING PLANT

MANUFACTURING PLANT.—Substantial brick buildings, ideally located. Approximately 45,000 square feet floor space. Private switch. Will sacrifice for quick sale. The Clifton Pratt Co., Cincinnati, Ohio.

FACTORY

FOR SALE.—At Old Bridge, N. J., a complete 500 H. P. boiler plant and power-house, together with an electric light plant (all in good condition), together with a lease on the site of the boiler-house and adjoining land sufficient for building a factory, with side track already installed on the property. This is an ideal location for a manufacturing concern wishing to get started in the shortest possible time. Apply to Dexter & Carpenter, Inc., 12 Broadway, New York City.

MILL

FOR LEASE.—Brick mill, 150-horse-power boilers and engines; large storage space, ready for quick installation new manufacturing machinery; 45 miles from Atlanta. P. O. Box 1443, Atlanta, Ga.

LAUNDRY

LOCATE in the best and fastest-growing city in the South. Payroll a million a week and growing every day. On account of poor health, owner will sell old-established, finely-equipped laundry at inventory valuation. Unusual opportunity for good manager to make exceptional profits. Address No. 5123, care Manufacturers Record, Balto., Md.

FOR SALE.—Laundry doing net business of \$250 per week, at only \$16,000. Ideal working conditions. Other business reason for selling. Address Box 160, Albany, Ala.

STONE CRUSHING PLANTS

FOR SALE.—Because of failing health, operator is forced to dispose of two stone-crushing plants located on C. & O. Railway near Richmond, Va. More Government work being and to be done in Tidewater Virginia than any other section, and these quarries are nearest by rail or water to the Va. capes. In perfect running condition, and will sell or lease to responsible parties. Address Box 927, Richmond, Va.

AGENCIES WANTED

MANUFACTURERS OF MACHINERY

desiring Southern representative or agent might do well to address W. I. P. Co., care Hotel Dempsey, Macon, Ga. Correspondence in confidence if desired. Most satisfactory reference.

AGENCIES WANTED

THE UNDERSIGNED FIRM, engaged as wholesale dealers of lumber and building material, domestic and export connections, desires to increase lines of activity, and will act as brokers or manufacturers' agent in sale of other lines of dependable merchandise. We have ample facilities. Address Rawls & Avant Co., Box No. 74, Miami, Fla.

SITUATIONS WANTED

COAL-MINING EXECUTIVE.—Who knows the coal business as but very few men do, desires connection with coal company or with group of mine owners where his special experience will be of value. He is familiar with, and can intelligently direct, every detail from the preliminary exploration of the field, through the organizing, financing and development stages, to the final economic production and marketing of coal. If you have confronting you a problem of consolidation, organization, financing, reduction of costs or increase in selling profits, or price, he will be glad to discuss it with you. Available on short notice. Executive position desired. Best of references. Address No. 5134, care Manufacturers Record, Baltimore, Md.

SALESMAN, in high standing, desires position with good company, with Southern territory preferred. Familiar with jobber and consumer trade. Several years' experience. Splendid references. Draft, Class 4-A. Address No. 5127, care Manufacturers Record, Baltimore, Md.

MARRIED MAN, above draft age, strictly sober, wants position as traveling salesman or clerical work with reliable manufacturer. Gift-edged references. Address No. 5138, care Manufacturers Record, Balto., Md.

ELECTRICAL AND MECHANICAL ENGINEER, 8 years of office, shop and construction experience. Draft exempt. Available on short notice. Executive position desired. Best of references. Address No. 5134, care Manufacturers Record, Baltimore, Md.

MEN WANTED

IF ACTUALLY QUALIFIED for salary between \$2500 and \$25,000, communicate with undersigned, who will negotiate strictly confidential preliminaries for such positions; executive, administrative, technical, professional; all lines. Not an employment agency; undersigned acts in direct confidential capacity, not jeopardizing present connections. Established 1910. Send name and address only for explanatory details. R. W. Bixby, E64-66 Niagara Street, Buffalo, N. Y.

SALES ENGINEERS WANTED.—A leading manufacturing concern has openings for salesmen for power plant and engineering equipment, engines, pumps, air compressors, condensers, etc. Must be draft exempt or in Class Four. Give full details, age, education, experience, reference and salary. Address No. 5122, care Manufacturers Record.

COVINGTON MACHINE COMPANY, Covington, Virginia, working on war-order business, desires to increase its force quickly by adding ten good machine-tool operators, three good floor erectors, inside work; also, three good moulders; good summer mountain climate; good pay and opportunities for overtime. Write or wire for particulars.

WANTED.—Experienced employment manager for large and growing corporation, now employing 3000 men. Must be acquainted with Southern labor and conditions. State age, experience and salary expected. Must come well recommended. Address No. 5132, care Manufacturers Record, Baltimore, Md.

WANTED.—By J. V. Boxley & Co., Mullens, W. Va., steam shovel crews, dinky engineers, firemen, etc., foreman and laborers for both tunnel and outside railroad construction. Now opening large contract; long job; best wages paid.

WANTED.—Man with some money to invest in box factory and manage same, located in good lumber section, in heart of a district that uses quantities of cases. Address No. 5105, care Manufacturers Record, Balto., Md.

BOATS FOR SALE

STEAM TUG, 81 ft. long, 16 ft. beam, 5½ ft. draft. Fully equipped. Recently completely overhauled and passed by U. S. Government Inspector. Bargain. Address Box 464, Savannah, Ga.

MACHINERY AND SUPPLIES

TWO ALLIS-CHALMERS cross-compound engines, condensing (without condensers), connected to 750 K. W., 4-wire, 3-phase, 4000/2300 volts, Westinghouse generators, complete with switchboards and exciters. These outfits must be handled quickly and can be had at approximately one-fourth of the new price. Engines or generators could be had separately. McBee Engine & Implement Co., Memphis, Tenn.

MACHINERY AND SUPPLIES

6x15" Woods No. 404 fast-speed planer, fully equipped; flooring heads, double ceiling heads, profiler and feed table, almost new.

No. 285 Berlin gang rip saw, practically new. 130 ft. 8" heavy steam pipe. 130 ft. 5" heavy steam pipe. 1000 ft. 4" water pipe. 40 H. P. center-crank engine. 8x10" side-crank engine. 1000 ft. 1½" transmission rope. G. S. Patton Lumber Co., Savannah, Ga.

FOR SALE.—5-ft. Trevor Jointer, Lockport, good condition, five new knives. Box 254 Raymond, Ga.

FOR SALE 75-HORSE-POWER BOILER. F. M. HUGHSON, ROANOKE, VA.

FOR SALE—MACHINERY IN 75-BBL. UT-TO-DATE MILL. LIBERTY MILLS, ROANOKE, VA.

FOR SALE.—Complete outfit of 12-in. suction dredge, consisting of pumps, engines, boiler, ladder, winch, etc., in good condition. Address Christian J. Larsen, Charleston, S. C.

GINNING OUTFIT.—2 70 Pratt gins, upright cleaner feeders, belt distributor, double press, shafting, pulleys and belting; good condition. Cheap; cash or easy terms. S. W. Shirley, Ansley, Rt. 1, Ala.

FOR SALE.—Roofing and flooring mill outfit complete; in good condition; located in Eastern North Carolina. Address No. 55, 701 W. 178th St., New York City.

FOR SALE.—12x12x16 Rand compressor, 60 H. P. boiler, power guy derrick, No. 2 Gates crusher, pumps, channel bar, derrick fittings, surfacing machines, plug drillers, blueprint frames. T. M. Byrd, Salisbury, N. C.

FOR SALE.—Power and lighting unit; General Electric 22 K. W., D. C. generator, with 15 H. P. motor attached; switchboard, etc. Almost new; \$550 cash. Woodward Machinery Co., 514 Main St., Cincinnati, Ohio.

MACHINERY.—Complete ginning outfit, three 60-saw gins, double revolving self-tramper press, 40-horse-power engine and boiler, elevator, belts, etc. J. A. Burroughs, Chester, S. C.

BOLT CATERPILLAR TRACTOR, 60 horse-power, good mechanical and operative condition. \$1500 cash. Miller Lumber Co., Millerton, McCurtain Co., Okla.

ONE 60-saw Gullett gin, complete for operating this season, in good running order; one 6x20-inch Fay & Egan single surface wood planer, all in good shape. L. L. Shifflett, Adamsville, Ala.

IF YOU are seeking to purchase steamers, or sailing vessels with motor, or without ready or under construction, machinery, new or second-hand boilers, chains, etc., apply for full particulars to Dennis Thiako, P. O. Box 47, Station G, New York.

TWO Buffalo steam engines: 13x12 horizontal engine, side crank, piston valve, rated about 35 to 50 H. P.; also 4½x5 vertical engine, first-class condition; can be shipped immediately. Fayette R. Plumb, Wellston P. O., St. Louis, Mo.

Office Desks, Chairs, Tables, Filing Cabinets (wood and steel), Card and Loose-Leaf Systems, Safes and Vaults, Drafting Instruments and Materials, Mimeograph and Duplicating Supplies, Blank-Book and all kinds of Commercial Stationery. Every known labor-saving Office Device. Send for catalog or special representative. Fielder & Allen Company, the Office Outfitters, Atlanta.

MACHINERY and SUPPLIES WANTED

ELECTRIC FURNACE WANTED.—Second-hand or new, if for immediate delivery, suitable for making ferro alloys. Send complete specifications, detailed statement of condition and price. Address No. 5073, care Manufacturers Record, Balto., Md.

600 K. V. A. UNIT WANTED.—Steam electric Corliss or four-valve. Must be in A-1 condition. Mail complete description and price to P. O. Drawer 278, Elizabethton, Tenn.

WANTED TO BUY.—Two pipe machines, direct connected, 1" to 4" and 4" to 10". Brooks Supply Co., Beaumont, Tex.

WANTED.—600 H. P. water tube boiler, one or two units, 150 to 200 pounds pressure. Frank Guild, Terrell, Tex.

WANTED.—300 H. P. engine and generator. Steam-electric, Corliss or four-valve. Must be in A-1 condition. Mail complete description and price to P. O. Drawer 278, Elizabethton, Tenn.

PROPOSALS

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS

More Southern Proposal Advertising Is Printed In The Manufacturers Record Than In Any Other Paper

Bids close July 24, 1918.

PROPOSALS FOR SHEET COPPER.
Street Lamps, Fuses, Batteries, Outlet Boxes, Condulets, Reflectors, Sockets, Switches, Fans, Copper Wire, Wire-Rope Cable and Clips, Platform Scale, Hammer Handles, Screws, Copper Tacks, Padlocks, Rim Locks, Vulcanizing Material, Burlap, Paper, Pencils, Bicarbonate of Soda, Paint Dryer, White Zinc and Zinc Oxide. Sealed proposals will be received at the office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10:30 o'clock A. M. July 24, 1918, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and information relating to this circular (1222) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 606 Common Street, New Orleans, La., and Fort Mason, San Francisco, Cal.; also from the United States Engineer Offices in the principal cities throughout the United States. A. L. FLINT, General Purchasing Officer.

Bids close July 20, 1918.

\$100,000 5% Road Bonds

Rogersville, Tenn.
We offer at sealed biddings \$100,000 in bonds of Hawkins County, Tennessee, issued for road improvements, said bonds to bear the arbitrary date of January 1, 1916, with interest at 5 per cent., payable semi-annually, denomination of \$1000 each, this being the remainder of a \$450,000 bond issue authorized by the Act of the General Assembly of the State of Tennessee and ratified by a vote of the people. Said bonds maturing \$25,000 five years from date of issue and \$25,000 each year thereafter until paid. Bonds and interest payable at the office of Trustee of Hawkins County. This offer of \$100,000 beginning with the final maturity of the \$350,000 heretofore sold, so that the entire issue of \$450,000 voted will mature \$25,000 each year, beginning with January, 1921, and ending January 1, 1938.

Bids are now invited upon the \$100,000 now to be sold, and all bids must be accompanied by cash or certified check of 2 per cent. of the amount as an evidence of good faith upon the part of the bidder, to be returned if bid is not accepted. Deposit check payable to the Chairman of the Board. Bids will be closed July 20, 1918, at 1 o'clock P. M.

The Board reserves the right to reject any and all bids without assigning any reason therefor.

I. E. SHANKS, Secretary;
H. B. STAMPS, Chairman;
C. F. LOUDERBACK,
GRANT GREENE,
G. M. REESER,
Committee.

Bids close July 15, 1918.

\$10,000 5% Bonds

The Mayor and Council of the Town of Harlem, Georgia, will receive sealed bids at the office of the Mayor until noon July 15, 1918, for 5 per cent. J. and J. 20-year School coupon bonds to the amount of \$10,000, dated July 1, 1918. Denomination \$100. Due 20 years after date. Principal and interest payable at the office of the Treasurer of the Town of Harlem.

J. T. OLIVE,
Mayor, Town of Harlem.
J. L. WASHINGTON,
Town Clerk.

Bids close August 5, 1918.

\$50,000 6% Bonds

Under and by virtue of an election held in the said Oconeechee Township on May 13, 1918, under order of the Board of Commissioners of the said Northampton County, in pursuance of a written petition of twenty-five freeholders presented thereto for it under section six of chapter 284 of public laws of North Carolina, session 1917, and under and by virtue of the authority conferred by section fifteen of the said act, the Board of Commissioners of the said Northampton County, will, up to August 5, 1918, receive sealed bids for fifty thousand dollars of bonds of the said Oconeechee Township or of any part of the said bonds. The said bonds are to be in denominations of one thousand dollars each and are to draw interest at the rate of 6 per cent. per annum from the date of their delivery, and the interest is to be payable semi-annually and the principal of said bonds is to mature as follows:

The first six of said bonds in five, six, seven, eight, nine, ten years, respectively, from date of issue; two eleven years, two twelve years, two thirteen years, two fourteen years, two fifteen years, two sixteen

years, two seventeen years, two eighteen years, two nineteen years, two twenty years, three twenty-one years, three twenty-two years, three twenty-three years, three twenty-four years, three twenty-five years, and three twenty-six years, three twenty-seven years, and three twenty-eight years, respectively, from date of issue.

Each bid shall be accompanied by a check certified and properly vouched for by some local bank in the said county in the sum of not less than 5 per cent. of the amount of such bid as a guarantee of good faith, and if bid should be accepted will be credited on such bid, otherwise it will be returned. All bids will be opened at Court House in Jackson, N. C., on August 5, 1918, at 12 o'clock M. The right is reserved to reject any and all bids. All bids shall be sent to S. J. Calvert, Clerk to the said Board, at Jackson, N. C. This 3d day of June, 1918.

J. G. STANCELL,
J. T. BOLTON,
J. H. FITZHUGH,
As a Constituting Board of Commissioners of Northampton County.
Attest: S. J. CALVERT, Clerk.

Bids close August 6, 1918.

\$75,000 School Bonds

Cumberland, Md., June 18, 1918.

Sealed bids will be received by the County Commissioners of Allegany County, Maryland, at their office in the Courthouse, Cumberland, Maryland, until 11 A. M. August 6, 1918, for an issue of Allegany County bonds known as "Allegany County School Bond Issue of 1918," amounting to seventy-five thousand dollars (\$75,000).

Bids may be for part only or all of the issue, and the right to reject any or all bids is reserved. Certified check for 5 per cent. of the amount bid must be deposited with any bid for said bonds as security for compliance with bid.

The bonds are authorized by Chapter 108 of the Acts of 1918, and bear interest at the rate of five (5) per cent. per annum, and will be issued in denominations of One Hundred Dollars (\$100), Five Hundred Dollars (\$500) or One Thousand Dollars (\$1000), purchaser to decide, and payable Fifteen Thousand Dollars (\$15,000) on the first day of July, 1931, and Fifteen Thousand Dollars (\$15,000) on the first day of July in each and every year thereafter until all of said bonds

have been redeemed, the last payment being due and payable on the first day of July, 1935.

Interest payable semi-annually, represented by interest coupons attached to said bonds, Bonds exempt from county and municipal taxation in Allegany County.

Financial Statement of Allegany County, Assessable basis.....\$77,344.44
Bonded indebtedness (including this issue).....\$77,344.44

Floating debt.....\$0.00
Address all bids to Angus Ireland, Clerk, County Commissioners, Cumberland, Maryland, marked "Bids for Bonds." Further information can be obtained from Clerk.

By order of the County Commissioners of Allegany County, Maryland.

ANGUS IRELAND, Clerk.

Bids close July 20, 1918.

Bridges

Tallulah, La., June 14, 1918.

Sealed proposals will be received by the Committee, at Tallulah, La., up to 12 o'clock noon, on Saturday, July 20, 1918, for the construction of three reinforced bridge in Madison Parish, viz.:

One across Bayou Brushy, at Fortwell Fork, about 30 feet long.

One across Bayou Mack, at Bruce Plantation, about 20 feet long.

One across Bayou Bull Calf, at Bruce Plantation, in two 30-foot spans, aggregating about 60 feet long.

All according to plans and specifications on file in the office of the Police Jury of Madison Parish, in Tallulah, La.

Each bid must be accompanied by certified check, favor the Police Jury of Madison Parish, for each bridge bid on, as guarantee that contract and bond, as required by specifications, will be furnished by successful bidder.

Payment for construction of this work will be made by this parish in cash.

The successful bidder must agree, if required by the bridge committee, to purchase from this parish at the market price the steel necessary to reinforce the concrete work on these bridges.

J. V. WRIGHT,
W. M. McDONALD,
JAS. H. DEVINE,
Bridge Committee of Madison Parish.

CAN YOU MAKE CASTINGS?

If so, Let Our Readers Know It
through an advertisement in the

Southern Shops Seeking Contract Work

Department of the

MANUFACTURERS RECORD

The Columbus Iron Works Co., Columbus, Ga., wrote us a short time ago, as follows:

"We are pleased to advise that since running our ad. in 'Southern Shops Seeking Contract Work' department, we have all the work we can take care of for the next six months. It certainly pays to advertise."

If your plant is not running at full capacity an advertisement in this department of the MANUFACTURERS RECORD outlining your special facilities will put you in line of securing some of the profitable work which foundries and machine shops in other parts of the country are compelled to sublet because of the greatly overcrowded condition now prevailing.

In these times it is a vital economy of war to keep your plant operating on a 100% capacity schedule, and an advertisement in the MANUFACTURERS RECORD may bridge the gap between your present production and your possible production. Try it.

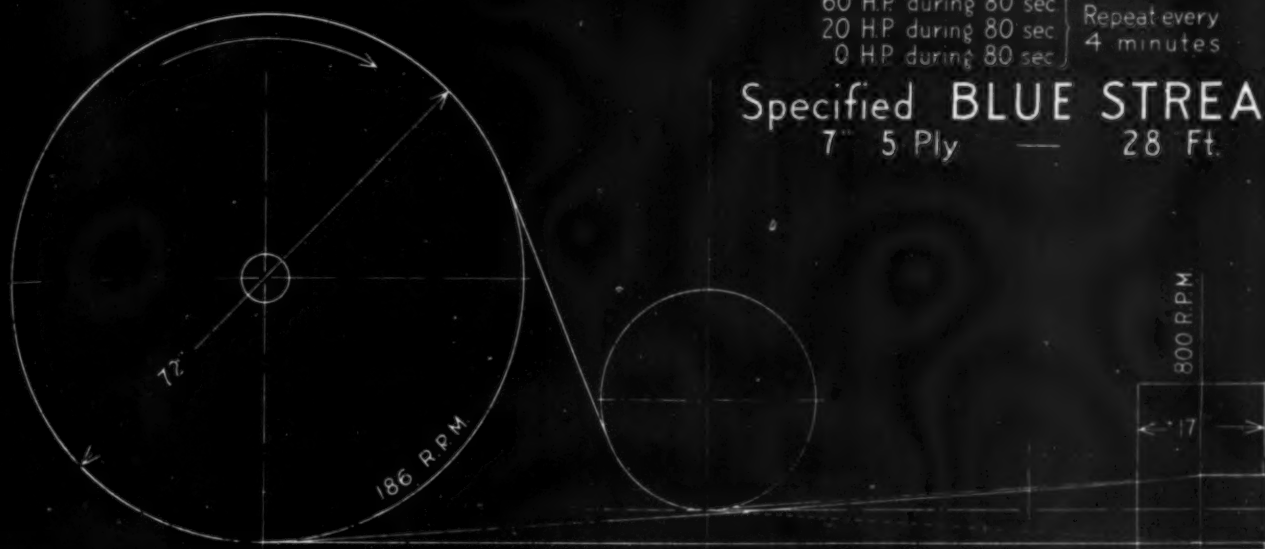
OUTLINE OF CENTRIFUGAL DRIVE

Attain maximum speed in 25 sec
Stop with brake on drive pulley in 30 sec

60 H.P. during 80 sec } Repeat every
20 H.P. during 80 sec } 4 minutes
0 H.P. during 80 sec }

Specified BLUE STREAK

7" 5 Ply — 28 Ft.



That Centrifugal Drive—and the G. T. M.

The Sugar-Mill Men swear that it is the hardest drive in the world—that centrifugal drive. Your men may want to argue the point. They may have a notorious belt devourer of their own. But they'll admit that the centrifugal is tough.

Out in Colorado almost everything was tried on it—cheap belts, expensive belts, natural belts and patent. But none did well. The G.T.M.—Goodyear Technical Man—out there called. He was asked the price of a Goodyear Belt to fit. He said he didn't know—that no Goodyear Technical Man sold belts that way.

The Goodyear Plan—He told them the Goodyear plan of prescribing belts—how conditions vary and how many kinds of belts we make to fit them—that if Goodyear men were only traveling price-lists we might as well sell belts by mail. He asked to see the drive.

What He Found—There was a driving pulley of 72 inches on a horizontal shaft. It drove a 17-inch pulley on a vertical shaft at 800 r. p. m. A quarter turn was necessary—and there was a 20-inch tightener idler.

And that was far from the worst of it. The machine had to start from a stop every four minutes—attain full speed in 25 seconds—had to be stopped in 30 seconds. In stopping, the brake heated the pulley until it couldn't be touched. He admitted that it was one of the hardest

drives in the world, and so he prescribed a 28-foot length, 7-inch 5-ply Blue Streak—the Goodyear belt especially designed for such service.

How It Worked—The master mechanic was skeptical. "It's a laced belt," he said, "and no lace will stand that racket." "There's a special lace for this service, and you'll get it with the belt," said the G. T. M. When the belt was applied it did better than any they had ever had—started better, stood stopping better—lasted longer.

They ordered it for other centrifugals—and asked the G.T.M. to make the regular Goodyear Plant Analysis covering every drive in their plant. And they're now ordering according to its prescriptions.

Try It in Your Plant—There are scores of G. T. M's. in the Goodyear organization. Several are in your territory. All are graduates of the Goodyear Technical School. All have had thorough experience with belts in many industries and with many plants in each.

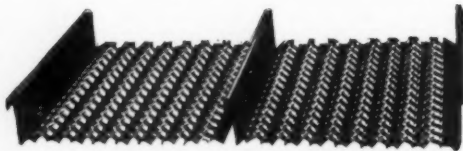
Ask us to send one of them to analyze your drives. Order the belt he prescribes for the very hardest. Then keep a service record on blanks we furnish. The resulting orders from you for other drives will compensate us for the free analysis service.

The Goodyear Tire & Rubber Company, Akron, Ohio

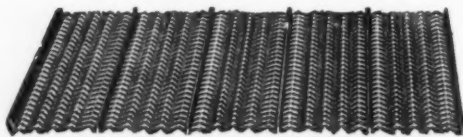
BELTING · PACKING HOSE · VALVES
GOODYEAR
AKRON



IT'S THE STRENGTH OF
THE RIBS THAT COUNTS



1 1/2" HY-RIB—Very rigid. For heavy loads and wide spans.

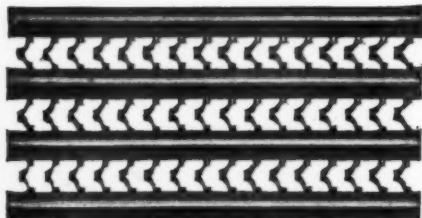


3/8" HY-RIB Lath used as a self-furring lath and in partitions, ceilings, etc., for stud spacings 24 to 36 inches.

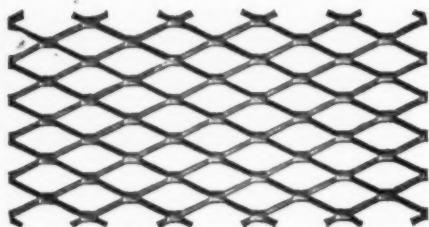


Channels without
prongs, 1, 1 1/2, 2
inches.

Truscon
pressed steel
channel studs
3, 4, 5, 6 in.;
also 2 inches
without
turned flange.



1-A HY-RIB Lath permits two-coat work instead of three.



Detroit Diamond Lath in four gauges.

USE HY-RIB

FOR

Economical Building

Build fireproof, economical, permanent buildings, and build them rapidly. With this type of construction no forms, studs or channels are necessary—thus saving valuable time, labor and space. Building with Hy-Rib is simplicity itself—merely place the sheets and apply plaster or concrete. Hy-Rib is equally satisfactory in the largest factory or the smallest residence.

Hy-rib and Rib Lath

The Complete Line Includes:

Hy-Rib in four types—3/8" to 1 1/2" for walls, partitions, ceilings, floors, roofs, furring. Various types of Rib Lath, Diamond Lath, Pressed Steel Channels and Studs, Corner Beads, Base Screeds, etc.

Write for our Hy-Rib Hand Book containing 144 pages of valuable information

TRUSCON STEEL COMPANY
(FORMERLY TRUSSED CONCRETE STEEL CO.)
YOUNGSTOWN, OHIO.
WAREHOUSES AND REPRESENTATIVES IN PRINCIPAL CITIES



Machinery, Equipment and Supplies WANTED

WANTED ELECTRIC MOTORS

SECOND HAND WILL PAY BIG PRICES
ALTERNATING and DIRECT CURRENT from 1/4 to 500 Horse Power,
1-2-3 phase ALTERNATING and 220 Volt DIRECT CURRENT

What Have You To Offer?

Send list with prices. Quick Action. If interested will mail check.

MONARCH ELEC. MOTOR CO.

Morris Benjamin, Prop.

212 Centre St.

NEW YORK CITY

WE WANT CONTRACTORS' EQUIPMENT AND COMPLETE POWER PLANTS

We will buy single items or entire plants.

What Have You to Offer?

ARTHUR DANIELS CO., Inc.

21 Park Row

New York, N. Y.

WANTED MACADAM ROLLER

for immediate shipment.

Address BOX 795

Care of Manufacturers Record

WANTED USED WIRE ROPE

Blue Centre—Hercules—Monitor

1/2 in. to 1 1/2 in. in lengths of 300 ft. and up.
Rope must be free from kinks and in fine
condition generally.

A. B. CLARK CO.

225 Fifth Ave.

New York City

WANTED AT ONCE

Second-hand machine tools as follows:

- 1—36"x16" Heavy Duty Lathe.
- 1—48"x16" Heavy Duty Lathe.
- 1—54"x16" Heavy Duty Lathe.
- 1—15" or 20"x20" or longer Heavy Lathe.
- Several Small Lathes about 15"x8" or 10".
- 1—48"x10" or thereabout Planer.

Must be in good condition and at reasonable price.

SOUTHERN EQUIPMENT COMPANY

P. O. BOX 915

MEMPHIS, TENNESSEE

WANTED

**1 Hydraulic Press
Linseed Type,**

About 15 Plates, capable of 500-600 tons
pressure; for immediate delivery. Give price
and sketch. Address

LINPRESS

Care Manufacturers Record, Baltimore, Md.

WANTED

Oil-mill equipment or single machines,
presses, cookers, rolls, cake formers, expel-
lers, etc.

ALBERT HERMANN

201 Baldwin Avenue

Jersey City, N. J.

WANTED

One Second-Hand Cochran Feed-Water
Heater and Purifier of sufficient capacity for
250 to 300 H. P. boiler. Must be in good con-
dition. Please give full description and low-
est cash price. Address

FEED WATER HEATER

Care Manufacturers Record Baltimore, Md.

Wanted

2000 tons 56 and 60-lb. Relaying Rails, with
Angle Bars. Southern delivery.

The Isaac Joseph Iron Company

525 Reading Road

Cincinnati, O.

WANTED LOCOMOTIVE CRANE

15 to 25 ton,

SLOTTER

18" or larger.

Address LOCRAN

Care of Manufacturers Record Baltimore, Md.

WANTED

Locomotive and Air Compressor

One 15 to 18-ton 42" gauge Saddle Tank
Locomotive. Must have good brakes and be
in first-class running condition. Also steam
or belt-driven Air Compressor for one loco-
motive of about 50 cubic feet. Address

W. S. TAYLOR CO.
CHATTANOOGA, TENN.

Special Advertisements of General Interest.

A MANAGER FOR OUR Machinery Department

Must know values, understanding buying and selling of heavy machinery, be a capable executive and be able to correctly and successfully carry through purchase and sales deals from inception to completion. The right salary to the right man. Give us full business history, salary expected, reference, etc., first letter. All replies confidential.

ZELNICKER in ST. LOUIS

We Make a Specialty of Dismantling

Old plants of every description, such as saw-mills, electric-light plants, etc. Our terms are spot cash. Advise us what you have to offer.

THE PIEDMONT IRON & METAL CO.
BALTIMORE, MD.

SECOND-HAND BAGS FOR SALE

75,000 first-class second-hand bags. Offer same for 15c apiece f. o. b. Roanoke, Va. Write or wire. Will be sold immediately.

Roanoke Scrap Iron & Metal Co.
Box 611 Roanoke, Va.

STEEL BUILDING WITH TRUSS ROOF FOR SALE

55 feet long, 80 feet wide, with 30-ton tramway and 2 travellers, complete; 72-foot span from center to center of rails.

Headley Stone Co. Bloomington, Ind.

GOVERNMENT CONTRACTORS

MODERN MACHINE SHOP FOR SALE. In Washington, D. C. \$23,000 Worth of Machinery will be sold at a BARGAIN.

AMMUNITION CONTRACTORS

Fully Equipped Press Metal Factory for Sale in Indiana. Brick building, 60,000 square feet on one floor. Pennsylvania Railroad. Will sell Building or entirety.

EDWARD L. BOARDMAN & CO. Munsey Bldg., Washington, D. C.

We are in Position to Take On

ADDITIONAL GOVERNMENT WORK

Gray Iron Castings

Mine and Clay Cars, Grate Bars and Other

General Work in Foundry and

Machine Work

Can Make Prompt Deliveries

WEBSTER, KINCAID & CO.

CINCINNATI and WELLSTON, OHIO

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The Manufacturers Record will place before you each week opportunities for developing your business that will be worth many times the subscription price.

MANUFACTURERS RECORD, Baltimore, Md.
\$5 per year 6 months, \$2.50

Your Daily Drafts upon the

Bank of World Knowledge

will all be promptly honored if you have behind you



It covers every known subject, from A to Z, in an authoritative, efficient and wholly delightful way that makes you eager to dig deeper.

FOR YOU this vast fund of interesting, timely information has been CONDENSED—CORRELATED—ORGANIZED—so that it is easy to find, to read, to understand, and to remember.

THE WORLD BOOK is the everyday reference for busy folks. It is just off the press. It was built by experts in the knowledge of the really vital things that people want to know about any subject.

Why Not Get Acquainted?

A request on your letter-head will bring a specimen volume for 10 days' free examination. No obligation implied.

Address Dept. M.

HANSON-ROACH-FOWLER CO.
104 So. Michigan Ave. Chicago

PROVEN Sulphur Land

For Sale—100 acres proven sulphur land, on railroad and in oil belt, adjoining Standard Sulphur holdings. \$250 per acre Will sell all or part. Terms.

B. T. Biggs, Pecos, Tex

NEW ORLEANS

¶ A great **INDUSTRIAL CANAL** is now being built, connecting the Mississippi River and the Sea.

¶ **NEW ORLEANS** is to become a Free Port, thus increasing greatly the shipping to and from this Port.

¶ Natural Gas is to be brought to **NEW ORLEANS**.

¶ Many new enterprises are coming to **NEW ORLEANS** while others are expanding.

¶ We have the choicest locations for Industrial and Commercial Property in and near **NEW ORLEANS**.

¶ Write us for further information.

J. L. ONORATO

Real Estate

820 Common St.

New Orleans.

Proposals advertised in the Manufacturers Record bring good results.

SAMUEL T. FREEMAN & COMPANY, Auctioneers
1519-21 Chestnut Street PHILADELPHIA, PA.

Administrators' and Master's Sale

In the Court of Common Pleas No. 3, for Phila. Co., June Term, 1917. No. 2341.
In Equity. In the Estate of Charles R. Simister, Decd.

Valuable Shoddy Mill

**Leverington Avenue and Green Lane
MANAYUNK, PHILADELPHIA**

Thursday, July 18, 1918, at 10.30 A. M.

ON THE PREMISES

REAL ESTATE—Five, Four and Two-story and Brick Buildings; Office and Garage having about 50,000 square feet of floor space, with 150 H. P. Boilers, Engines, 8000-Gallon Water Tank, Fire Pumps, etc. Lot 248½x233½ feet, with Railroad Siding.

MACHINERY—Comprising Machinery and Equipment of an up-to-date Shoddy Mill, including 3 Schofield Dusters, 2 Carbonizing Machines, Extractors, Rag-pickers, 12 Sets Furbush Double Shoddy Cards, 3 Sets Bridesburg Shoddy Cards, Card-Grinding Frames, Baling Presses, Willow Finishing Picker, 3-Bowl Scouring Machine, 200 H. P. Engine, 3 100 H. P. Boilers, Machine-Shop Equipment, Shafting, Hangers, Belting, Small Equipment, etc.

STOCK—About 475,000 lbs. Raw and Picked Stock, including Brown Cattle Hair, Gray Camel Hair, Horse Hair, Black Cotton Hair, Soft Back Carpets, Wool Carpet, Goat Hair, Camel-Hair Cotton, Merino Camel Hair, Tallow Bags, Door Mats, etc. Also the Furniture of a well-equipped office, including Typewriters, Safes, Desks, Watchman's Clock, etc.

By order of

CORNELIUS HAGGARTY, JR., Esq., Master.
WILLIAM T. CONNOR,
THOMAS McCAFFREY,
Administrators.

Catalogs mailed upon application to

SAMUEL T. FREEMAN & COMPANY, Auctioneers
1519-21 Chestnut Street PHILADELPHIA, PA.

Bargains in Machinery and Supplies.

24-Inch CAST IRON PIPE

9,500 ft. Bell and Spigot, 12-ft. lengths, weight
183 lbs. per ft. First Class. Priced Right.

ZELNICKER IN ST. LOUIS

Get Bulletin 237--78 bargain pages in Rails, Cars, Locomotives,
Machinery, Tanks, etc.

IRON AND STEEL PIPE WIRE AND MANILA ROPE MALLEABLE AND CAST FITTINGS

Large stock of good sound SECOND HAND
pipe in long straight lengths. No rust pits or
eaten places; couplings and threads perfect

Largest stock of NEW pipe in the Middle West
OHIO PIPE CO., Works and Yards, FINDLAY, OHIO

TUBING, ALL SIZES

PIPE CUT TO SKETCH

SECOND-HAND PIPE

Large stock, all sizes, furnished with new threads and couplings.

JAMES F. GRIFFITH 416-24 Moyer Street
PHILADELPHIA, PA.

MENTION MANUFACTURERS RECORD WHEN YOU WRITE

FOR SALE REBUILT MACHINERY

For Immediate Delivery

- 1-16x32x12 Cross-Compound Murray Rolling Mill Corliss Engine, belt drive.
- 1-400' Worthington Surface Condenser.
- 2-66"x16" Tubular Boilers.
- 1-16x36 Double Eccentric Heavy-Duty Fulton Corliss Engine, belt drive.
- 1-14x20 Atlas Automatic Engine, belt drive.
- 1-40x60 No. 10 gauge Steel Stack.
- 1-36x70 No. 10 gauge Steel Stack.
- 1-5x7½ Vertical Throttling Engine.
- 1-Induced-Draft Fan, 60" diameter, 37" outlet, steam driven.
- 1-20 and 34x28 Tandem Compound Fitzburg Engine, direct connected to 300 K. W. direct-current G. E. generator.
- 1-450 K. W. G. E. Alternator, 2300 vo'ts, 3-phase, 60-cycle, direct connected to E. P. Allis cross-compound engine, steam-driven surface condenser, with switch-board panel and instruments.
- 1-800 K. W. G. E. Alternator, 2300 volts, 3-phase, 60-cycle, direct connected to McIntosh & Seymour horizontal heavy-duty engine, 100 R. P. M.
- 1-New 350 H. P. I X L Open Feed-Water Heater, Purifier and Receiver, with cut-out valve and oil separator.

H. J. GEBHARDT
1420 Fisher Building CHICAGO

FOR SALE Mining Machinery New and Unused

Good make Mill and Power Plant, cost \$90,000.00 on C. B. & Q. R. R. near
Deadwood, So. Dak.

- | | |
|--|---|
| 3 Boilers, 66x18 ft. | 5 Wilfley Concentrating Tables, Belts and Shafting. |
| 1-300 H. P. Engine. | |
| 1 Generator, 75 K. W., 250 volts, 300 amps. | 3 Redwood Cyanide Tanks. |
| 1 No. 6 McCully Crusher. | 2 Redwood Solution Tanks. |
| 1 No. 3 McCully Crusher. | 2 Redwood Storage Tanks. |
| 1 Ore Conveyor. | 2 Redwood Gold Tanks. |
| 40 Stamps complete, Feeders, Motors, Tables, Copper Plates, Shafting, Pulleys and Belts. | 2 Iron Zinc Boxes. |
| | 1 Triplex Pump, 8x10. |
| | 2 Triplex Pumps, 7x8. |

Various tools, pipes, belts and shafting. Has treated less than 1000 tons
of ore.

PRICE \$35,000.00

FRANK STEISKAL, Trustee
1817 Loomis St., Chicago

Inquire
or

J. M. HODGSON
Deadwood, So. Dak.

FOR SALE PIPE

Second-Hand
All Sizes, ½" to 24"

Furnished with new threads and
couplings, suitable for every practical
purpose.

Also large assortment of Contract-
ors' Equipment, Hoisting Engines,
Boilers, Concrete Mixers, etc.; all
thoroughly overhauled.

Marine Metal & Supply Co.
167 South St. NEW YORK

FOR SALE Second-Hand Pipe

*Cut and threaded to any desired
length. Pipe for steam, water, irrigation
or other purpose. Write for
prices. We can positively save you
money. Your orders solicited. We
are always in the market for scrap
iron, metals, etc.

B. CASSELL & COMPANY
Chattanooga Tenn.

PIPE ALL SIZES Bargain Prices.
and New; IMMEDIATE DELIVERIES

8,000' of 12" pipe.
10,000' of 8" pipe.
10,000' of 6" pipe.
10,000' of 4" pipe.
15,000' of 3" pipe.
50,000' of 2" pipe.
50,000' of 1½" pipe.
100,000' of 1¼" pipe.
100,000' of 1" pipe.
Also, a large stock of 16", 18" and 20"
pipe.

Pipe & Contractors Supply Co.
3 Dover Street NEW YORK

WROUGHT IRON PIPE

Thoroughly overhauled,
with new threads and couplings.
Guaranteed to give entire satisfaction.
Pipe cut to sketch. It will pay to ex-
respond with us.

Albert & Davidson, Inc.
Oakland and Kent Sts.
Brooklyn, N. Y.

BELTING

Large stock of new and second-hand, single
and double—attractive prices.

L. F. SEYFERT'S SONS, Inc.
437 N. 3d Street Philadelphia

To Our Advertisers

We Ask Your Co-operation

Owing to the labor shortage and the un-
certainty of the mails at this time, we ask
your co-operation in sending in advertising
copy and cuts. It is our aim to give you the
best service possible—submitting proofs and
making changes whenever requested—but
due to the unusual conditions to-day, it is
necessary for us to strictly observe the
following "Closing-down Dates."

When proofs of advertisements are re-
quired, copy and cuts must be in our hands
two weeks in advance of date of publication
and approved proof back one week in advance
at the latest.

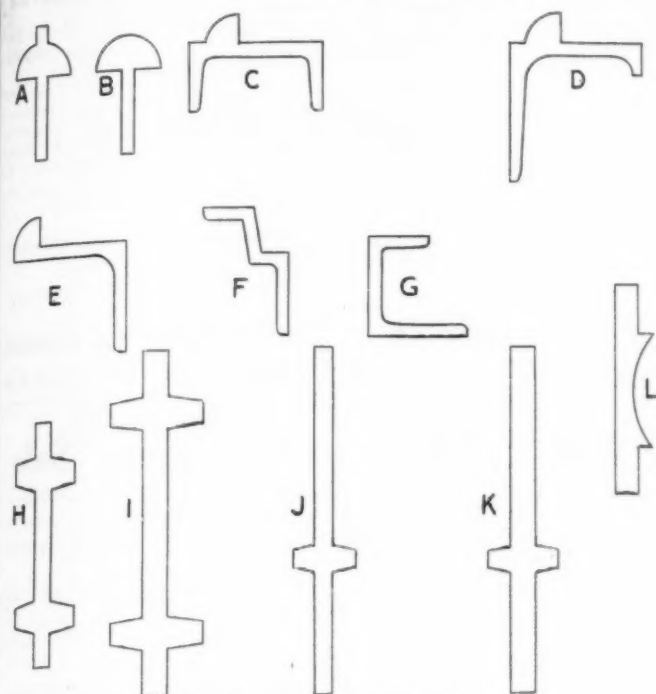
When proofs of advertisements are not
required, copy and cuts must be in our hands
one week in advance of date of publication.

Advertisers are requested to observe the
necessity of having copy in our hands in
ample time as stated above, to the end that
advertisements may always receive proper
classifications and be inserted in the issue
for which they are intended.

MANUFACTURERS RECORD,
BALTIMORE, MD.

Published Every Thursday

Steel Sash Moulding for Sale



Drawing about 1/2" to 1-inch scale.

Shape A—1 1/8" x 3/8"	x30' 0", about 45 tons.
" B—1 1/8" x 1/2"	x30' 0", about 10 tons.
" C—1 1/8" x 1 1/8" x 1/2"	x30' 0", about 25 tons.
" D—1 1/8" x 1 1/8" x 1/2"	x30' 0", about 20 tons.
" E—1 1/8" x 1 1/8" x 1/2"	x30' 0", about 35 tons.
" F—1 1/8" x 1 1/8" x 1/2"	x30' 0", about 35 tons.
" G—1" x 1" x 1/2" x 1/2"	x30' 0", about 7 tons.
" H—2 1/2" x 3/4"	x30' 0", about 25 tons.
" I—3 1/2" x 1/2"	x30' 0", about 30 tons.
" J—3 1/2" x 3/4"	x30' 0", about 25 tons.
" K—3 1/2" x 1/2"	x30' 0", about 25 tons.
" L—2 3/8" x 1/4"	x30' 0", about 5 tons.

ALL MATERIAL BRAND NEW

AMIRON SUPPLY COMPANY, Inc.
Third and Lincoln Avenues **BRONX, N. Y.**

Brick Machinery For Sale

One 60 thousand capacity Chambers Brick Machine. Chambers Channel Iron Dry Kiln Cars, Transfer Cars, Clay Cars, Pug Mill, Disintegrator, Tank and Oil Pumps, Engines, Machinery for complete plant.

HARTFELDER-GARBUTT MACHINERY COMPANY
EQUIPMENT AND SUPPLIES FOR
MILLS AND RAILROADS
SAVANNAH, GEORGIA

BRICK PLANT EQUIPMENT FOR SALE

We have purchased the plant and equipment of the Charlotte Brick Co. plant located at Grattan, S. C., 20 miles from Charlotte, N. C. We have for sale at a bargain price, steam shovel, locomotive, relay rails, second-hand pipe, boilers, engines, pumps, dryers, steel brick cars, brick making machinery, etc.

CONSOLIDATED IRON & METAL CO.
CHATTANOOGA, TENN.

Boston Iron and Metal Co.

Buyers of Scrap Iron and Metals
Complete Plants Purchased

BALTIMORE

MARYLAND

REBUILT MACHINERY ALL IN STOCK

BOILERS: 2-72x18; 2-72x16; 3-66x16; 1-60x16; 1-54x14; 2-48x16; 2-48x14.

BOILER TUBES: 20,000 ft. 4"; 10,000 ft. 3 1/2"; 5000 ft. 3".

ENGINES: 12x30 Lane & Bodley Corliss; 15x16 Nagle; 14x16 Buckeye; 3-14x21 Lane & Bodley; 14x18 Chandler & Taylor; 12x18 Atlas; 13x10 Harrisburg; 11x13 Russell; 10x14 Chandler & Taylor; 9x12 Nagle; 10x12 Erie; 9x4 Allfree; 8x8 Orr & Sembower; 6x8 Nagle.

LATHES: 14"x6" Flatlers; 16"x6" Lodge & Shipley; 15"x4" 9" Sebastian; 16"x8" Reed; 16"x8" Gray.

MOTOR-GENERATOR SETS: 1-50 K. W. Westinghouse, 125 volts Generator, direct connected to 75 H. P. Westinghouse 3-phase, 60-cycle, 230-volt motor; 1-17 1/2 K. W. Bullock, 125-volt Generator, direct connected to Westinghouse 3-phase, 60-cycle, 230-volt motor.

GENERATORS-60-CYCLE: 175 K. W. Westinghouse, 3-phase, 2200 volts at 900 R. P. M.; 150 K. W. G. E., 3-phase, 220 volts at 600 R. P. M.; 85 K. W. Allis-Chalmers, single phase, 2300 volts at 900 R. P. M.; 90 K. W. Electric Machinery Co., 3-phase, 2300 volts at 900 R. P. M.; 75 K. W. Westinghouse, 3-phase, 2300 volts at 720 R. P. M.; 75 K. W. Western Electric, 3-phase, 240 volts at 1200 R. P. M.

MOTORS-3-PHASE, 60-CYCLE: 100 H. P. New G. E., 220 volts, 900 R. P. M.; 50 H. P. New G. E., slip ring, 220-440 volts, 900 R. P. M.; 2-50 H. P. New G. E., 220-440 volts, 900 R. P. M.; 35 H. P. New G. E., slip ring, 220-440 volts, 1200 R. P. M.; 30 H. P. New G. E., 220 volts, 1200 R. P. M.; 30 H. P. F. & M. rebuilt, 220 volts, 1200 R. P. M.; 2-25 H. P. New G. E., 220-440 volts, 1200 R. P. M.; 20 H. P. New G. E., 220 volts, 1200 R. P. M.; 10 H. P. New G. E., 440 volts, 1200 R. P. M.

MOTORS-D. C. 250 VOLTS: 55 H. P. G. E. at 900 R. P. M.; 30 H. P. Northern at 600 R. P. M.; 25 H. P. Fischer at 500 R. P. M.; 20 H. P. Crocker-Wheeler at 750 R. P. M.; 10 H. P. Jantz & Leist at 900 R. P. M.; 10 H. P. Browning at 1000 R. P. M.; 10 H. P. Cincinnati Electric at 1000 R. P. M.; 5 H. P. Triumph at 1350 R. P. M.; 5 H. P. Triumph at 725 to 1450 R. P. M.; 3 H. P. Bullock at 650 R. P. M.; 2-3 H. P. Triumph at 1500 R. P. M., direct connected to swing saws.

POWER PLANT MACHINERY AND ACCESSORIES

Send us your requirements

The Randle Machinery Co. 1734 Powers St., Cincinnati, Ohio

FOR SALE

16x42 left-hand Hamilton Corliss Engine, standard girder frame, with crane steam separator; 12 ft. by 24 in. Band Wheel; one whole, steel-rim Medart Pulley, 58 diameter by 18 in. face; one whole, Medart steel-rim Pulley, 4 ft. diameter by 20-inch face; one whole, Medart steel-rim Pulley, 6 ft., 10 inches diameter by 18-inch face; one whole, Medart steel-rim Pulley, 6 ft. diameter by 18-inch face; one Gandy, 8-ply Belt, 49 feet long by 18 inches wide. All in splendid second-hand condition and ready for immediate use.

TUSCALOOSA COTTON SEED OIL COMPANY
TUSCALOOSA, ALA.

FOR SALE

One Brown Corliss Engine, 14x36, in splendid condition. \$750
Line of Shafting, with bearings. 100
55 ft. Double Leather Belt, 17 in. wide and very good. Sold only with engine. 150
One Horizontal Tube Boiler, 60 in. x 18 ft., 44-l flues; in good condition. 300

Address **J. ANDREW CAIN Versailles, Ky.**

FOR SALE

25 H. P. Steam Engine. Price \$125.
25 H. P. Fairbanks-Morse Gas Engine. Price \$325.
10-foot Air Separator. Price \$250.
7"x12" Porter Dinkey Locomotive. Price \$1050.
No. 1 Sturtevant Ring Roll Mill. Price \$300.
54"x25-ft. American Process Dryer complete. Price \$350.
Shafting, Pulleys, Screens.
EDWIN W. COOPER Nashville, Tenn.

ENGINE FOR SALE

One 150 H. P. Slide Valve Engine, complete. In first-class condition. Can be seen in Richmond, Va.

VIRGINIA IRON & METAL CO.
Box 705 **Richmond, Va.**

ANVILS-ANVILS-ANVILS

About five hundred — mostly new — some slightly used; attractive prices.

L. F. SEYFERT'S SONS, Inc.
437 N. 3d Street **Philadelphia**

BLOWER FOR SALE

FAN AND COILS.—1 full-house, left-hand top horizontal, discharge New York Blower, 10 ft. high, complete with self-contained engine; also Heating Coils, containing approximately 5000 lineal feet of 1" pipe, all in good condition and subject to immediate shipment. Price \$1000.

OHIO MALLEABLE IRON CO.
COLUMBUS, OHIO

For Sale ONE GUYED STEEL STACK

110 feet x 56 inches. Stack two years old. Immediate shipment.

Henry P. Thompson
Mercantile Library Bldg. **Cincinnati, Ohio**

FOR SALE

1—No. 9 Williams Chip and Bark Shredder, 18 to 24 tons per hour, used about 60 days, good condition.

1—5" Positive-Pressure Blower System, consisting of:

- 1—No. 8 positive-pressure blower.
- 1—No. 42 charger.
- 1—10"x10" 35 H. P. stationary steam engine.
- 140 feet 8", 20-gauge galvanized blower pipe.
- 2—positive switches.
- 3—adjustable elbows.
- 1—flexible coupling.

This system in use about 60 days—all good condition.

1—Six-section Screen for chips; four sections have 3/4" round perforations, two sections have 1/2" round perforations, 6' diameter by 30 feet long.

1—Link-Belt Bucket Elevator, 30 feet from center to center.

1—12 H. P. Vertical, Single-Cylinder Fairbanks-Morse Gasoline Engine, used about 60 days, in good shape.

1—6" Fairbanks-Morse Centrifugal Pump, 1000 gallons capacity per minute, used about 60 days, good condition.

1—8-foot, left-hand, type A Allis Band Mill.

1—6"x30" No. 94 Berlin Matcher

1—6"x9" No. 94 Berlin Matcher.

1—125 H. P. Westinghouse A. C. Motor, with starter.

3—40 H. P. Allis-Chalmers A. C. Motors, with starters.

1—17 K. W. Westinghouse D. C. Generator.

2—60 Amp., 14-Point Charging Rheostats.

1—2-Circuit, 60-Amp. Charging Panel, 16"x24", equipped.

3—100-Amp. Hour Meters.

3—2000-lb. General Vehicle Electric Tractors, lumber type.

1—250-Volt D. C. Generator; needs rewinding of armature.

For further description, write

INDUSTRIAL LUMBER COMPANY
ELIZABETH, LA.

Diesel Oil and Gas Engines FOR SALE

- 1—12 H. P. horiz. sgl. cyl. Gas.
- 1—35 H. P. horiz. 2-cyl. Gas. or Kero.
- 2—60-65 H. P. 3-cyl. vert. Oil.
- 1—100 H. P. 3-cyl. vert. Gas, D. C. to
- 1—65 K. W. 250-V. 3-wire Generator
- 1—120 H. P. belted 3-cyl. Diesel Oil.
- 1—170 H. P. belted 3-cyl. Diesel Oil.
- 3—225 H. P. belted 3-cyl. Diesel Oil.
- 1—450 H. P. belted 6-cyl. Diesel Oil.
- 2—120 H. P. 3-cyl. Diesel Oil, D. C. to
- 2—85 K. W. A. C. Generators, Switchboards.
- 2—225 H. P. 3-cyl. Diesel Oil, D. C. to
- 2—150 K. W. A. C. Generators, Switchboards.
- 1—450 H. P. 6-cyl. Diesel Oil, belted to
- 1—300 K. W. A. C. Generator, Switchboard.

Also other high-grade power equipment.

All above guaranteed in good operating condition. Immediate shipment.

A. McMILLAN

619 MONADNOCK BLOCK, CHICAGO
Specialist in
Diesel Oil Engineering

HARRIS BROTHERS COMPANY, CHICAGO

Offer From Stock

Rails

1800 tons 70-lb.
250 tons 85-lb.
150 tons 40-lb.
Complete with angle bars and spikes for immediate delivery.
6 miles 36" gauge Portable Track, with steel ties, 20 and 25-lb.

Steam Hammers

Bement Miles 800-lb. Single - Frame Steam Hammer.
400-800-lb. Board Drop Hammers.
1-400-lb. Mines & Peck Board Drop Hammer.
1-800-lb. Merrill Board Drop Hammer.
2-100-lb. Rope Lift Drop Hammers.
1-100-lb. Little Giant Upright Trip Hammer.
1-Boss Novelty 75-lb. Upright Trip Hammer.
1-30-lb. Rochester Long Wooden Helde Trip Hammer.
1-30-lb. Bradley Short Wooden Helde Trip Hammer.

Surface Condensers

1-1400' Wheeler.
3-600' Worthington.
2-500' Worthington.
1-1500' Baragwanath.
1-1200' Baragwanath.

Rotary Shears

Lennox Rotary Bevel Shear, Inclined Cutters; cuts $\frac{1}{2}$ " plate.
Killing Rotary Shear, 16" throat; cuts $\frac{1}{2}$ " plate.
Lennox Rotary Plate Splitting Shear; will shear to center of 16"; will shear rounds and flats $\frac{1}{2}$ ".

Air Compressors

2-18x29x18x24 Laidlaw-Dun & Gordon.
1-14x22x14-16 Chicago Pneumatic Tool Co.
50-9 $\frac{1}{2}$ x9 $\frac{1}{2}$ x10 Westinghouse air-cooled Locomotive Compressors.
2-1200' Ingersoll, Imperial type, low duty, 22x14x16x16.

Water Pipe

50,000 feet 1".
35,000 feet $\frac{1}{2}$ ".
65,000 feet $\frac{3}{4}$ ".
48,000 feet 2".
8,000 feet 3".
15,000 feet 4".
13,000 feet $\frac{1}{2}$ " double extra strong Seamless Steel Tubing; good for 6000 lbs. pressure, fitted with Briggs threads each end and couplings.

Nut and Tapping Machines

6-Spindle $\frac{1}{2}$ " Vertical Nut Tapping Machine (Acme type).
1-4' Hand Power Roll, capacity 10-gauge material.

Locomotive Cranes

1-20-ton O. & S., 8-wheel, 42 $\frac{1}{2}$ ' boom.
1-30-ton, 8-wheel Industrial Locomotive Crane, 32' goose-neck boom.
1-40-ton Bucyrus, 8-wheel, 55' boom.
1-2-ton, 4-wheel railway type, 110-volt storage battery Electric Locomotive Crane; boom 15', full revolving, with motors and controllers.

Overhead Traveling Cranes

1- $\frac{1}{2}$ -ton Northern, 4-motor Electric Traveling Crane; fish-belly type, 75' span.
1-4-ton, two-motor Electric Crane, 20' span, 220-volt.
2-75' Steel Plate Girders, equipped complete with 20-ton-capacity hand-power trolley.
1-25-ton hand-power Traveling Crane.

Dump Cars

150 Western and Oliver type, all-steel, 12-yd. Dump Cars, which we offer for sale or lease. These cars are located at various points in the East.

Punches and Shears

1-Heavy-duty Gate Shear, with 21" blade, 11" throat, capacity cutting up to $\frac{1}{2}$ " plates, spur gear 42" diameter by 10" face.
1-Bement-Niles Combined Punch and Shear, 22" depth of throat both sides, punches $\frac{1}{4}$ " through 1", shears 6x1" flats.
Single End Shear, 22" throat; will punch $\frac{1}{2}$ " through 1".
Single End Punch, 27" throat, punch $\frac{1}{4}$ " through $\frac{1}{2}$ ".

Rolling Mill Stand

1-New Rolling Mill Stand for finishing ends 72" plate mill, two rolls high, 24" diameter by 72"; arranged for direct connection.
1-16" Rolling Mill, three rolls high, two-stand, direct connected to a steam engine.

Hoisting Engines

1-7x10 double-cylinder, single-drum Mundy Hoisting Engine, skeleton type.
3-4 $\frac{1}{2}$ x6 double-cylinder, single-drum Stroudsburg Hoisting Engine.
1-8 $\frac{1}{2}$ x10 double-cylinder, double-drum Flory Hoisting Engine, skeleton type.
1-9x10 double-cylinder, double-drum Russell Wheel & Foundry Co. Engine.
1-Double-cylinder, double-drum Flory Hoisting Engine, skeleton type, cylinders 8 $\frac{1}{2}$ x12.
1-7x10 double-drum, double-cylinder Mundy.

20" Pipe

15 miles of 20" spiral riveted A. & R. Pipe, with flanged compression connections. This pipe is made of No. 8 gauge; is in A-1 condition. Delivery can be made immediately.

Marion Steam Shovels

1-No. 14 Railway type, $\frac{1}{4}$ -yard Marion Steam Shovel, $\frac{1}{4}$ " revolving independent crowding engine, slewing and hoisting engines. This rig, located at North Carolina, is in good condition. Can be shipped at once.

Industrial Dump Cars

150-20" gauge 1-yd. cap. V-shaped and one-side Dump Cars.
75-Flat-top, 20" gauge Industrial All-Steel Cars.
118-24" gauge K. & G. Box Cars, 30 cubic feet capacity.
67-24" gauge Atlas Flat Cars.

Locomotives

2-20" gauge Steam Locomotives.
1-24-ton Shay geared standard-gauge Locomotive.
1-50-ton 4-wheel standard-gauge Locomotive.
1-60-ton American & Baldwin.
1-65-ton American & Baldwin.
1-6-wheel American Locomotive, 61 and 63-ton, 180 lbs. pressure.

Wire Cable

Several thousand feet of Steel Wire Cable, ranging in sizes from $\frac{3}{8}$ " to 2". Send us a memorandum of your requirements.

300 H. P. Boilers

3-Wickes Bros. Vertical Boilers, pressure type, quadruple riveted, butt strapped, equipped with Murphy stokers and all breeching connections. These boilers are located at Detroit, Michigan, and shipment can be made at once. Hartford inspection, 151 lbs. pressure.

Steel Tanks

20-10,000-gallon Storage Tanks.
4-5,200-gallon Storage Tanks.
2-4,000-gallon Storage Tanks.
2-3,000-gallon Storage Tanks.
1-5'x24' Pressure Tank.
2-6'x18' Pressure Tanks.
1-54'x12' Pressure Tank.
25-16'x46' Pressure Tanks.
1-20' diameter, 135' high, Water Tower Tank, made of plates $\frac{1}{4}$ ", $\frac{3}{8}$ " and $\frac{1}{2}$ ", reinforced, including ladder.

Steel Buildings

1-Steel Building, 76' clear span, any length up to 600' long. Columns 30' to bottom chord.
1-Steel Roof complete, 80' clear span, 340' long, consisting of 17 80' hip trusses, purlins, wind bracings, etc.
1-Steel Frame Building, 80'x140', consisting of columns, trusses, purlins, window framing, bracings, etc.
1-Flat-Roof Steel Frame Building, 80' clear span, 160' long, 40' columns, all complete.
1-Steel Building, L-shaped, 450x50 ft. x 162x150 ft.; 15-ton electric crane, center bay; 5-ton electric crane, L. bay; two 2-ton cranes, mono-rails, hoists, etc.
1-Lot, consisting of 40 76' clear span Flat Roof Trusses.

BOILERS

For Quick Shipment

10 250 H. P. Wicks Vertical Water-Tube Boilers, 150 lb. pressure.
1 300 H. P. Wicks Boiler, 160-lb. pressure.
1 500 H. P. B. & W. Boiler, 150-lb. pressure.
2 400 H. P. B. & W. Boilers, 150-lb. pressure.
4 250 H. P. B. & W. Boilers, 150-lb. pressure.
1 275 H. P. B. & W. Boiler, 150-lb. pressure.
2 200 H. P. Heine Boilers, 150-lb. pressure.
1 425 H. P. Heine Boiler, 150-lb. pressure.
1 400 H. P. Stirling Boiler, 150-lb. pressure.
4 72"x18" Tubular Boilers, 125-lb. pressure.
4 350 H. P. Stirling Boilers with Superheaters, 200-lb. pressure.
4 66"x6" Tubular Boilers, 125-lb. pressure.
3 48"x150" Steel Smokestacks.
"And other makes and sizes."

J. F. DAVIS

1409 Harris Trust Bldg., Chicago, Ill.

FOR SALE

Two 325 and one 525 H. P. B. & W. Boilers, with steel headers, 150 and 160 lbs. steam, complete; two 42" stacks, 300 ft. each, almost new; two 100 H. P. Horizontal Return Tubular Boilers, 125 lbs. steam; 50 Brick or Foundry Cars, 54"x56" wide and long, 36" gauge, almost new; one 12x12 Upright and Horizontal Engines, cheap; 20 tons 6" Cast-Iron B. & S. Pipe, with valves and hydrants, practically new; 90 reels of Wire Rope, $\frac{1}{2}$ to 2 $\frac{1}{2}$ ", inclusive, different lengths, excellent condition; 10,000 ft. NEW $\frac{3}{4}$ " Galvanized Wire Rope; one mile 1" Track Cable, for hoisting or guys; 10x 10 Ingersoll-Rand Belted Air Compressor; one mile 2 and 3" Wrought Pipe, also three miles 4", used for air purposes, good as new.

Easton Machinery Co.

Drake Building

Easton, Pa.

BOILERS

	H. P.	Make	Pressure	Each
One	400	Heine	160	\$6000
One	306	Heine	175	6000
One	225	Heine	175	4000
Three	203	Heine	160	2400

Power Machinery Exchange, Inc.

1 Montgomery Street Jersey City, N. J.

4-72"x18"

RETURN TUBULAR BOILERS

125 lbs. working pressure, butt-strapped; complete with fronts, grates, etc.; no stacks. Immediate delivery.

Jas. C. Lacey

Hartford, Conn.

IMMEDIATELY AVAILABLE

515 H.P. B. & W.

BOILERS

Approved for 160 lbs. pressure. B. & W. Superheaters, Roney Stokers, Overhead Steel, Suspensions, and Columns for two-boiler settings.

THE RHODE ISLAND CO.

PROVIDENCE, R. I.

W. C. SLADE, Supt. of Power & Lines.

FOR SALE

Heine Water Tube Boiler, in perfect condition. Size of boiler 330 H. P. on 10 sq. ft. rating. Heating surface 3300 sq. ft. One shell 48" diameter, 31' 9" long. Thickness of shell plate $\frac{1}{4}$ ", heads $\frac{3}{8}$ ". Longitudinal seams, double-strapped butt joints. Water leg plates $\frac{1}{4}$ ". Tubes $\frac{3}{4}$ " diameter, 18' long, 189 in number.
Boiler originally designed for 180 lbs. working pressure.
Price \$22 per H. P., f. o. b. car East St. Louis, Ill.

Monsanto Chemical Works
1800 S. Second St. St. Louis, Mo.

For Sale

Marine Equipment

One 225 H. P. seagoing tug.
One 1500-ton steel barge.
One floating clam-shell or orange-peel digger with Lambert equipment; immediate delivery.

Address

MARINE

care Manufacturers Record

Baltimore, Md.

BOILERS

For Immediate Delivery

2-300 H. P. Maxim Water Tube Boilers, 180 lbs. working pressure. Ready to load on cars.
1-500 H. P. Maxim Water Tube Boiler, 160 lbs. working pressure. Ready to load on cars. Inspected and approved by Hartford Steam Boiler Inspection & Insurance Co.
1-250 H. P. Stirling Water Tube Boiler, 150 lbs. working pressure.

All Eastern Pennsylvania delivery. Inspection invited.
Prices Liberal for Quick Movement.

General Equipment Company

30 Church St., New York City

BARGAINS

For Quick Sale

One 125-H.P. Scotch-Marine boiler, complete, 125 lb. Insurance.
One No. 9 Jeffery-Hammer mill.
Five hoisting engines and boilers.
One 25-H. P. single drum gasoline hoist, 36" drum.

SOUTHERN MACHINERY CO.
KNOXVILLE, TENNESSEE

FOR SALE

HIGH PRESSURE BOILER FEED PUMP
1-10x16x8 $\frac{1}{2}$ x18 Fairbanks-Morse Co. Duplex Compound, Outside Packed Plunger Pump with Governor.

PFANNMUELLER ENGINEERING CO.
1733 First National Bank Bldg. CHICAGO

BARGAINS

1-150 H. P. Tubular Boiler, steel casing, 150 lbs. pressure.
1-50 H. P. Marine Type Boiler, on skids, 150 lbs. pressure.
1-1380' Sullivan WE2 Air Compressor.
1-60 K. W., 125-volt D. C. Engine and Generator Outfit.
4-125 H. P. Boilers, return tubular, 125 lbs. pressure.

HODGSON MACHINERY COMPANY, Knoxville, Tenn.

The Herfurth Engine Co., Inc.

ALEXANDRIA, VA.

Dealers in

Second-Hand Machinery

For Sale

Three 72"x16" High-Pressure Return Tubular Boilers; 72 4" tubes; all fittings; Geop shipping point. \$1200 each.

T. F. JOHNSON

1424 Jefferson County Bank Building
BIRMINGHAM, ALA.

BERRYMAN'S

Refrigerating Machinery

EXCHANGE

The Bourse
PHILADELPHIA, PA.

Used Refrigerating Machinery bought, sold and exchanged.

Ice Plants complete and erected, 3 to 150-ton capacity; all makes; belt and steam-driven.

Refrigerating Plants for butchers, grocers, ice-cream manufacturers, etc. Some fine bargains; 3 to 50-ton; electric or belt-driven.

Ice Tanks—wood and steel; Ice Cask 200 and 300-lb. sizes. Used Fittings, Valves, etc.

Refrigerating Machines, Raw Water Ice Systems, Pumps, Boilers, Motors, etc.

We want York or Frick second-hand 25-ton Steam Ice Plant, complete. 15-ton Steam-driven Refrigerating machine.

Harris Brothers Company

Chicago

Machinery and Tools

OF BIRMINGHAM BOILER WORKS

OWNED AND FOR SALE BY

F. MAYER, 1601 Monadnock Bldg., Chicago, Illinois

- 1—W. H. Wood Size No. 31 Hydraulic Riveter, complete with accumulator, high-pressure pump, overhead traveling crane, tank and hydraulic hoist; gap has 8 ft. 3 in. clearance. Have numerous snaps, dies and punches, as well as rivet heating furnace.
- 1—Lennox Rotary Bevel Shear, size 2, capacity $\frac{3}{4}$ -in. steel. Six extra cutting disks or shear blades.
- 1—Set 10-Ft. 6-In. Power Bending Rolls, with reversing mechanism hand raising and lowering attachments; top roll 12 in. dia.; bottom rolls 8 in. dia.
- 1—Chicago Pneumatic Air Hoist, 5-ton capacity, $\frac{5}{8}$ -in. cable.
- 1—McGrath Air Flue Welder, complete with 18x36 oil-burning Rockwell furnace.
- 1—Flue Cutter and Cleaner, 120 in. long, belt drive.
- 2—Sturtevant 30-in. Steel Pressure Blowers.
- 2—Heavy Cast-Iron Round Blacksmith Forge Bowls with connections, 48-in. dia.
- 1—American Radial Drill, 42-in. arm, 36-in. swing, cone drive, with swinging and tilting table, with worm movement.
- 1—No. 4 Long and Allstater Combination Punch and Shear, 5-in. throat; no shear attachments; have punches and dies.
- 1—Anvil, 250 lbs.
- 200-ft. 2 7-16-in. dia. Line Shaft, with pulleys and hangers.
- 1—10x16 Nagle Center-Crank Slide-Valve Engine.
- 1—10-ft. x 10-ft. x 6-in. deep 3-16-in. Plate Tank (open top).
- 1—30-in. wide, 36-in. deep, 12-ft. long Tank (open top).
- 1—20-gallon Air Pressure Fuel Oil Burner or Torch.
- 1—Air Drill.
- 1—6-in. Wrought-Iron Vise.
- 1—Boiler Testing Pump.
- 1—Fairbanks 2000-lb. Scale.
- 3—4000-lb. capacity Yale & Towne Chain Block.
- 1—Hand Shear.
- 1—Set 36-in. Tinnings' Bending Rolls, 2 $\frac{1}{4}$ -in. dia.
- 1—JERECKI BOLT CUTTER, capacity $\frac{3}{4}$ -in. to 1 $\frac{1}{2}$ -in., complete with dies for standard bolts and stay bolts.
- 1—Angle or Rail Bending and Straightening Machine, size 6-in., screw power.
- 1—Lot Wood Patterns for Boiler Castings.
- 1—Lot Manila Rope, Steel and Wood Blocks.
- 1—Lot of Manhole Castings.
- 10—Pneumatic Air Hammers and Snaps.
- 1—Crane Trolley.
- 1—Lot of Hand Tools.
- 2—Rivet Forges.
- 1—Hand Forge Blower.
- 1—Wall Crane, Double Channels, 12-ft. arm and attachments, with trolley.
- 1—Small Overhead Crane, made of 8-in. double channels, 18-ft. span, with trolley.
- 1—Allen 72-in. Portable Pneumatic Hammer, Boiler or Plate Riveter, capacity 1-in. rivets.
- 1—Allen Compression Lever Riveter, 10-in. reach, 11-in. gap, capacity $\frac{3}{4}$ rivets.
- 1—Norwalk Straight-Line High-Pressure Air Compressor, with primary and secondary air cylinders, making it two-stage, 12-in. stroke, capacity about 250 ft. free air per minute at 100 lbs. pressure.
- 1—Overhead 12-Ton Capacity Hand-Power Traveling Crane, 26 Ft. 8 In. Span, constructed of 15-in. I-beam, $\frac{3}{8}$ -in. web, 6 $\frac{1}{2}$ -in. flange.
- 1—Overhead 10-Ton Capacity Hand-Power Traveling Crane, 26 Ft. 8 In. Span, constructed of 15-in. I-beam, $\frac{3}{8}$ -in. web, 6-in. flange.

All the above can be inspected by applying to John H. Moore; care of Birmingham Boiler Works, 40th St. and 10th Ave., Birmingham, Alabama. Phone Main 1133, or care of Tutwiler Hotel, Birmingham, Alabama.

For Sale

We have purchased the entire Frostburg Brewing Companies Plant.

From this equipment we offer the following:

- 50-Barrel Copper Cooker, 10 ft. high and 10 ft. wide. Complete.
- 1 De La Vergne 7-ton Ice Machine or 15-ton Refrigeration. Corliss engine type. Cans, Freezing Tank and entire plant.
- 4 Steam and Gas Engines, 4 to 60-horse, vertical and horizontal.
- 5 Steam Pumps and Compressors, and over 10,000 feet of 1-in. to 4-in. Pipe.
- 50 Large Oak Casks and Aging Vats; 50 E. 100 bbl.; 3000 Beer Kegs, $\frac{1}{2}$ to 1 bbl.
- 1 Copper Cooler, 9 ft. high and 12 ft. long, of 30 2 $\frac{1}{2}$ " Copper Tubes and Castings.
- Fillers, Washers, Rockers, Filters, Coppers and the entire Machinery.

EDWARD L. BOARDMAN & CO.
Munsey Bldg. Washington, D. C.

STEAM TRACTOR

35-horse-power Reeves Steam Tractor; Canadian type boiler. This machine is in excellent shape, having just been thoroughly overhauled, and can be seen at Newton, Kan.; an excellent machine for threshing, rock crushing and grading roads. Price, \$300 f. o. b. Newton, Kan.

J. R. SUTHERLIN & CO.
518 Commerce Bldg. Kansas City, Mo.

PIPE AND FITTINGS

For Sale

Miscellaneous lot of 24-in. and 36-in. Cast Iron Pipe and Fittings, approximately 36 tons. For details write

T. R. HARBER, Purchasing Agent
Kansas City Light & Power Co., Kansas City, Mo.

TRIPLEX PUMPS

Deane 2- $\frac{5}{8}$ x8; 2-5x6.
Bumsey 1-8x10.
Platt Iron Works 1-3 $\frac{1}{2}$ x4.
Cameron Pumps.
1-No. 9 5" suction, 4" discharge.
1-No. 2 2 $\frac{1}{2}$ " suction, 2" discharge.
Also 25 Assorted Tanks.

A. G. SCHOONMAKER & SONS, Inc.
25 Church St. New York

CORLISS AND AUTOMATIC ENGINES

50 to 2000 HORSEPOWER
EVERY ENGINE PERFECT
INSPECTIONS EASILY ARRANGED

My Service Reaches
from Coast to Coast
H. M. BRUCH, Engine Specialist
400-401 Gridley Bldg., SYRACUSE, N. Y.

FOR SALE

No. 60 Heald Cylinder Grinder.
No. 200 Heald Ring Grinder.
All Jigs and Fixtures for making Rings and Pistons.

P. J. Hentschel Machine Co
703 Hillen St. Baltimore, Md.

PLANERS

5'x15', 4-head machine.
36x36x9, 1-head Pond.
30x30x12, 1-head Gleason.
42x42x13' Hill-Clark.

SCULLY-JONES & CO.
Railway Exchange Bldg. Chicago, Ill.

TRAVELING CRANE SPECIALIST

1, 2, 4, 5, 7 $\frac{1}{2}$, 10, 15, 20, 25 tons capacity. Inspection in operation. Immediate shipment. Send your requirements by TELEPHONE to CORTLANDT 1900-2020, or WIRE

N. B. PAYNE
25 CHURCH STREET NEW YORK

STEEL SHEET PILING FOR SALE

About 400 pieces each 14, 16 and 18 ft. Wemlinger No. 9-Gauge Steel Sheet Piling at sacrifice. Address

Box 464 SAVANNAH, GA.

FOR SALE—EQUIPMENT of Victor Cotton Oil Refinery

LOUISVILLE, KY.

IMMEDIATE SHIPMENT

Boilers and Stacks

- 1—60-in. x 18-foot horizontal tubular, 90 horse-power.
- 1—66-in. x 18-foot horizontal tubular, 110 horse-power; both connected with heater, breeching and iron stack 56-in. x 100-foot, 3-16-in. thickness.
- 2—72-in. x 18-foot horizontal tubular, 150 horse-power; connected with heater, breeching and iron stack, 56-in. x 100-foot, 3-16 in. thickness.

Dynamo and Engine

- 1—Wiley Generator, 220-volts, 50 kilowatts, and
- 1—Atlas Engine, 75 horse-power, directly connected; switches, etc.

D. C. Motors

- 1—Wiley Motor, 25 horse-power, 220-volts, starting box, complete.
- 1—Wiley Motor, 7 $\frac{1}{2}$ horse-power, 220-volts, starting box, complete.

Steam Pumps

- 3—Dean single-acting, 10x7x12, 4-inch discharge.
- 2—Dean single-acting, 7x6x10, 3-inch discharge.
- 2—Dean 5-inch air pressure agitators; pipe, complete.

Elevator

- 1—Vogt, 2-ton, 6 ft. 10 in. x 6 ft. platform; 7-horse-power D. C. motor, complete.

Fairbanks Scales

- 6—20-ton Tank Scales, complete.
- 2—500-lb. Platform Floor Scales.

Lead-Lined Tanks

- 1—10-ft. 3-in. dia. at top, 10-ft. 7-in. dia. at bottom, 12 ft. 5 in. deep, 2-in. cypress, lined with 6 and 10-lb. lead; capacity, 7880 gallons.
- 1—48-in. x 48-in. x 26-in., 2-in. cypress;
- 1—36-in. x 54-in. x 24-in., 2-in. cypress, both lined with 10-lb. lead.

Soap Presses

- 1—Ralston Automatic, power-driven, 4000-box capacity.
- 1—Crosby, foot-power, 4 $\frac{1}{2}$ -in. stroke, on iron frame.

Analytical Balance

- 1—Imported, platinum-plated, capacity 200 grams each pan, sensitive 1.30 milligram;agate bearings; set of weights. in fine condition.

Soap Trucks and Frames

- 393—Frame trucks, 6-in. flanged wheels, 14-in. gauge.
- 119—Rack trucks, 5-in. flanged wheels, 22-in. gauge.
- 542—Iron sleds, 10-lb. U. S. gauge, 43-in. x 58-in.

Lard Presses

- 18—Wrought-Iron Stands, 20 in. x 30 in. x 10 ft. high, operated by hand-power ratchet and weights. (Will sell separately.)

Absorption Refrigerator

- 1—Vogt, 10-ton, single compressor, complete, ready for operating.

For further particulars address

LOUISVILLE CAR & FOUNDRY CO.
FLOYD AND G STREETS LOUISVILLE, KY.

1876 THE MACHINERY HOUSE OF THE EAST 1918

FRANK TOOMEY, Inc.

LATHES

10"x4' Climax.
14"x5' New Carroll Jamieson Quick Change.
14"x8' New Carroll Jamieson Quick Change.
4-15"x6' New Sidney D. B. G. Quick Change, swing 17".
7-17"x8' New National Quick Change.
17"x8' New Sidney D. B. G. Quick Change, swing 19".
18"x8' Rahn Mayer.
18"x8' Flather.
18"x8' Schumaker Boye.
19"x8' Reed.
24"x20' Reed.
32"x24' Fay & Scott.
24"x48"x24' McCabe Double Spindle.

TURRET LATHES

2"x24' Jones & Lamson Geared Head.
2-24' Davis Boring and Chucking Lathes.
1-5' S. & K. Back Geared Wire Feed.
2-No. 1 Bardon & Oliver Hand Screw Machines.

HORIZONTAL BORING MILLS

4" Bar Niles Knee Type.
2½" Bar Warney & Swasey Knee Type.

MILLERS

No. 2 Kempsmith New Universal, with vertical attachment.
No. 1½ Cincinnati Universal.
No. 1 U. S. New Hand Miller.

SHAPERS

4-14" New Steptoe.
1-14" Steptoe.
6-16" New Steptoe B. G.
2-24" New Steptoe B. G.
16" Bement Traveling Head.

GRINDERS

10"x30" Brown & Sharpe.
10"x24" Iroquois.
10"x20" Bath.

No. 1 New Fraser Universal.
No. 1 New Grand Rapid Universal Reamer and Cutter.
No. 2 Grand Rapid Universal Reamer and Cutter.
No. 100 New Wells Universal Reamer and Cutter.
No. 3 B. & S. Universal Reamer and Cutter.

RADIAL DRILLS

42" Niles Plain Cone Drive.
20" Universal Plain Cone Drive.
42" New Canedy-Otto.

DRILLS

36" New Superior Sliding Head.
32" New Superior Sliding Head.
30" G. & E. Sliding Head.
2-28" New Superior Sliding Head.
2-25" New Superior Sliding Head.
25" New Superior Sliding Head, with tapping attachment.
24" New Superior Stationary Head.
21" New Superior Stationary Head.

20" New Superior Stationary Head.
20" New Champion Stationary Head.

HAMMERS

350-lb. Sellers Single Frame Steam.
250-lb. New Little Giant Belt.
4-100-lb. New Little Giant Belt.
3-50-lb. New Little Giant Belt.
4-25-lb. New Little Giant Belt.

PLANERS

36"x36"x8' Gray, two heads.
30"x30"x10' Fitchburg, one head.
24"x24"x8' Gray, one head.

NUT TAPPERS

¼" to 2" Six-Spindle National.
½" to ¾" Five-Spindle National.
¾" to 1" Five-Spindle National.

SLOTTERS

10' Newton Power Feed to Rotary Table.

"STEAM AND ELECTRICAL EQUIPMENT"

A. C. OIL ENGINE UNIT

1-375 K. W. Fort Wayne, 3-phase, 60-cycle, 2300-volt Alternator, direct connected to one pair of Diesel Vertical Oil Engines.

STEAM TURBINE A. C. SET

1-110 H. P. De Laval Steam Turbine, direct connected to two 37½ K. V. A. General Electric, 2300-volt, 60-cycle, 3-phase Alternators, with direct-connected exciter.

MOTORS

Large stock of A. C. and D. C. Motors, new and used, ½ to 200 H. P.

HORIZONTAL RETURN TUBULAR BOILERS

150 H. P. 72"x18' Coatesville, with Murphy Stoker, 125 lbs. steam pressure.
4-150 H. P. 72"x18' Vulcan Iron Works, 125 lbs. steam pressure; complete with stacks and steam blower.
1-150 H. P. 66"x20' Sotter Bros., 125 lbs. steam pressure.

WATER TUBE BOILERS

1-150 H. P. Babcock & Wilcox Water Tube Boiler, 125 lbs. steam working pressure, with 80 ft. of 36" dia. stack, heater, feed-water pump and damper regulator; complete plant.
2-250 H. P. Babcock & Wilcox Water Tube Boilers, 150 lbs. steam working pressure.

AIR COMPRESSORS, BELT DRIVEN

1-12¼x12 Ingersoll-Rand, belt driven, 305 cu. ft. capacity.
1-22"x13"x18" Laidlow-Dunn-Gordon, 2-stage, belt driven, duplex, 1140 cu. ft. capacity.

AIR COMPRESSORS, STEAM DRIVEN

30"x20"x30" Ingersoll-Sargeant, class "A," straight line steam driven, 900 cu. ft. capacity.
15"x15"x14" Hall Steam Pump Co., steam driven, 80 cu. ft. capacity.
12"x12"x12" Laidlow-Dunn-Gordon, 400 cu. ft. capacity.
10"x10"x12" Bury, single, straight line, steam driven, 167 cu. ft. capacity.

127-131 North Third St.

PHILADELPHIA, PA.

Corliss Engines, Water Tube Boilers and Direct Connected Unit

DIRECTED CONNECTED UNIT

(1) Engine, Rice & Sargeant, Simple, Non-Condensing, 30x48", 750 H. P. Generator, Westinghouse, D. C., 10-pole, 550 V., 90 R. P. M., 500 K. W.

ENGINES

(3) Allis-Corliss, Simple, Non-Condensing, 30x60".

GENERATORS

(3) Westinghouse, D. C., 4-pole, 550 V., 500 K. W.

LEATHER BELTS

(3) 53", 140' long, Double Leather Belts.

BOILERS

(8) Campbell & Zell Water Tube Boilers, 12 tubes high and 12 tubes wide, nominal rating 275 H. P. each; set in batteries of two each, steam pressure 150 lbs. each.
(1) Campbell & Zell Water Tube Boiler, 9 tubes high and 12 tubes wide, nominal rating 225 H. P., pressure 150 lbs.

PUMPS

(3) Worthington Duplex Feed, 9"-5¼"x10".
(1) Knowles Deep Well, 12"-7¼"x36".
(1) Westinghouse 9½" Air Pump.
(2) Centrifugal Circulating, Direct-Driven, 12" Pumps, each driven by a 70 H. P. General Electric 550-volt direct-current motor, speed 500 R. P. M.
(2) Horizontal 13x8" Worthington Dry Vacuum Pumps, direct driven by a 12 H. P. General Electric 500-volt direct-current motor, speed 300 R. P. M.

MISCELLANEOUS

One (1) Berryman Feed Water Heater, 5"x17".
One (1) Locke Damper Regulator, complete with Damper Operating Mechanism.
One (1) 15-ton Traveling Crane, 70' span, with Hand-Operated Bridge and Hoist.
Two (2) Perfection Oil Filters, 100-gallon capacity each.

BOSTON IRON & METAL CO.
PRATT and FREMONT STS. BALTIMORE, MD.

IMMEDIATE SHIPMENT NEW APPARATUS NEW ROTARY CONVERTER

200 Kw., 1200 r.p.m., interpole 60-cycle rotary, with three self-cooled transformers, 2300 or 4000 volts, 275 volts direct current output, with complete switchboard equipment.

DIRECT CURRENT MOTORS

1-15 H. P., 115 volt, 1150 r.p.m.
3-15 H. P., 230 volt, 1150 r.p.m.
3-20 H. P., 230 volt, 1150 r.p.m.

60 CYCLE MOTORS

H.P.	Rpm.	Make	Type	Volts	Phase	Starter
15	1130	Allis-Chalmers	Sq. Cage	220	3	Auto starter
20	1800	Allis-Chalmers	Sq. Cage	220	2	Auto starter
25	1200	Gen. Elec.	Slip Ring	220 / 440	3	Drum controller
25	900	Gen. Elec.	Slip Ring	550	3	Drum controller
35	720	Gen. Elec.	Slip Ring	220 / 440	3	Drum controller
40	900	Allis-Chalmers	Slip Ring	220 / 440	3	Drum controller
50	900	Allis-Chalmers	Slip Ring	220 / 440	3	Drum controller
75	1750	Allis-Chalmers	Sq. Cage	440	3	Auto starter
100	720	Gen. Elec.	Slip Ring	2200 or lower	3	Drum controller
100	600	Gen. Elec.	Slip Ring	2200 or lower	2	Drum controller
100	900	Gen. Elec.	Slip Ring	220 / 440	3	Drum controller
125	900	Allis-Chalmers	Slip Ring	220 / 440	3	Face plate
150	600	Gen. Elec.	Slip Ring	220 / 440	3	Drum controller
200	600	Gen. Elec.	Slip Ring	2200 or lower	3	Drum controller

USED APPARATUS

1-60 Kw., 1200 r.p.m., synchronous motor generator set, with direct connected exciter, 2300 volts, 2 or 3 phase, to 275 or 550 volts direct current output, with switchboard.

1-300 Kw., 3-bearing belt driven 450 r.p.m., 275 or 550 volts direct current generator.

1-400 H. P., 375 r.p.m. compound wound direct current motor, 275 or 550 volts.

LEO A. PHILLIPS

Steam and Electrical Equipment
90 West Street, New York City
Phone, Rector 3866 and 3867

Producer Gas Engine Plant

Complete, For Sale, Immediate Delivery

Consisting of two Louis Pettibone Producers each having 1000 K. W. engine capacity—two 500 K. W. General Electric 2200-volt 60-cycle three-phase generators, each direct connected to Snow Pump Company Producer Gas Engines.

Plant complete and in good operative conditions. Address

SOUTHERN PUBLIC UTILITIES CO.

E. F. TAYLOR, Gen. Supt.

CHARLOTTE, N. C.

WILSON MACHINERY CO.

9 PINE ST. ST. LOUIS

A. C. UNITS 3 PHASE 60 CYCLES

E. W. Make	Volts	Rev.	Engine
300 G. E.	2200	—	Poppet Valve Chandler Taylor
100 G. E.	2200	8600	Curtis St. Turbine
100 Westg.	2400	225	18x15 4-Valve H'g.
125 Westg.	2400	225	14x15 4-Valve H'g.
125 Atlas	Any	277	18x14 Ideal
100 Westg.	2400	225	19x18 Uniflow H'g.
100 Westg.	Any	251	16x27x16 Westg. Vert. C. C.
100	2200	200	Simple H. D. Corliss
500 West. El.	2200	3000	Curtis Hor. Turbine
300 G. E.	440	—	McL. & Sey. C. C. 4-Va.
500 G. E.	Any	3000	Westg. St. Turbine Hor.
500 Westg.	2200	3000	Atlas Steam Turbine
100 Atlas	2200	150	Rice & Sarz. C. C. Cor.
500 G. E.	2200	98	Atlas Corliss C. C.
500 Westg.	2200	—	—

D. C. UNITS—250 Volts

E. W. Make	Volts	Rev.	Engine
300 Ft. Wayne	250	120	Eric City 4-Va.
500 Atlas	250	100	Atlas Vert. C. C.
1300 Ft. Wayne	250	90	22 & 38x48 Ham. C.C.H.
400 G. E.	250	120	18-36x42 Tand. Com. Cor.
300 G. E.	250	185	B. Wood C. C.
275 G. E.	250	150	25x26 Harr'g
200 Sprague	250	100	20x36 Corliss
300 Atlas	250	120	14 & 22x30 Atlas C. C. Cor.
150 Goodman	275	210	18x19 Ridgway
100 C. W.	250	250	Eric Ball Tand.
275 Westg.	250	270	14x14 Payne

ENGINES

30x60 Atlas; 28x48 Brown Corliss; 26x48 Atlas; 22x42 Filter Corliss; 18x36, 16x36 St. Louis Corliss, practically new; 14x36, 12x36 Murray Corliss, excellent condition.

BOILERS

H. P.	Press. Lbs.	H. P.	Press. Lbs.
4x14	125	150	Heine
6x18	125	2-200	Heine
8x18	125	2-300	Wicks. Vert.
12x18	125	2-375	Stirling
12x24	125	2-483	Heine
12x20	150	2-500	Heine
4-7x22	125	815	Stirling
1-12x24 & W.	150		

This is only a partial list. Let us know your exact requirements; we probably have it.

Selections From Our Stock

3-phase, 60-cycle Motors

Q. H. P.	Make	Volts	Type	Speed
1 1/2	Cr.-Wh. (with resistance type starter)	550	Q	1800
1 1/2	G. E.	220	I	900
1 1/2	Westg.	220	I	1155
1 1/2	G. E.	NEW	KT	900
2 1/2	Fbks.-M.	220/440	KBV	1300
2 1/2	Westg.	220	CS	1160
2 1/2	Fbks.-M.	220/440	KBV	1200
2 1/2	Wagner	220/440	BP	1120
3 1/2	G. E.	NEW	KT	900
3 1/2	Triumph	220/440	MT	900
3 1/2	G. E.	NEW	M	900
3 1/2	Westg.	220	CS	1170
4 1/2	Westg.	NEW	CS	870
4 1/2	Wagner	NEW	BP	850
4 1/2	Fbks.-M.	220	CS	900
4 1/2	Triumph	220	CS	720
4 1/2	Westg.	220	CS	860
5 1/2	Westg.	NEW	CS	720
1 1/2	Westg.	440	CS	1200
1 1/2	G. E.	550	M	600
1 1/2	G. E.	NEW	K	600
1 1/2	G. E.	2200	I	600
1 1/2	G. E.	NEW	M	580

GEORGE SACHSENMAIER CO.

Office and Salesrooms, 141-43-45 N. Third St. Warehouse and Shop, 528-30-32 N. Third St. PHILADELPHIA

All kinds Motors and Generators in stock.

KENT MILL FOR SALE

Just overhauled, good as new, with NEW 35-ft. Elevator and NEW 35 H. P. A. C. Motor, 3-phase, 60-cycle, 220 or 440 Volts. Can ship at once. Address C. S. C., care of Manufacturers Record

D. C. MOTORS

220 VOLTS In Stock Immediate Shipment

No.	H. P.	Make.	Speed.
1	1	Sturtevant	1400
2	2	Sturtevant	1250
1	2	Sturtevant	1000
1	3	Westinghouse	1650
1	3	Sturtevant	1500
1	5	Sturtevant	1000
1	5	Westinghouse	1650
1	10	Sturtevant	900
1	15	Sturtevant	800
1	15	Allis-Chalmers	800
1	25	Sturtevant	900

All shunt wound and complete with slide rails, pulleys and Cutler-Hammer starters. Fine condition.

K. L. Jones Machinery Co.

Atlanta, Ga.

Immediate Delivery

1—50 H. P. 2-phase, 60-cycle, 220-volt, squirrel-cage Fairbanks-Morse Motor, with pulley, base and brand-new starting box.

1—50 K. W., 2200-volts, R. F., Westinghouse, 1200 R. P. M., 13.1 ampere, 3-phase, 60-cycle, with base, pulley, switchboard and exciter.

(Send for list of apparatus in stock)

GEO. F. MOTTER'S SONS

Steam & Electrical Engineers
YORK, PENNA.

Do you receive our Stock Sheet Monthly? We have a complete stock of Motors—Both A. C. & D. C.—Ranging from 1 to 200 H. P.

Wire us—Write us—Phone us. We are at your Service.

DUQUESNE
New and used Electrical Equipment
Electric & Mfg. Co.

Write, wire or 'phone our nearest office:
PITTSBURGH, PA.
or 230 S. LaSalle Street, CHICAGO, ILL.

Dynamos and Motors

One 50 H. P., 220-volt, 60-cycle, 3-phase, 1120 R. P. M. Westinghouse Motor complete.
One 15 K. W., 125-V. Eddle Generator to Ideal horizontal center-crank steam engine.
One 50 K. W. and one 100 K. W., 125-250-volt, two or three-wire General Electric Generators, direct connected to Ball-Wood center-crank steam engines.

Write for list of other machines.

S. J. STEWART (ELECTRIC)
312 Carondelet St. NEW ORLEANS, LA.
Long Distance Phone M201-2002.
We Operate the Largest Electric Repair Shop South

EQUIPMENT

Immediate Delivery

GENERATING SETS

- 1—20 K. W. D. C. General Electric to Ideal engine.
- 2—25 K. W. D. C. Thompson & Ryan to McKewen engine.
- 1—15 K. W. 40-volt Eddy Electric Motor Generating Set.
- 1—80 K. W. 220-volt D. C. Allis-Chalmers Generator.
- 1—135 K. W. 240-volt 2-phase Stanley Electric Generator, with engine.

MOTORS

From 2 to 80 H. P., direct current, 220 volts.

HOISTING ENGINES

- 1—32 H. P. D. C. D. D. Mundy, 8x12, with boiler.
- 1—30 H. P. D. C. D. D. Lidgerwood, 8 1/4 x10, with boiler.
- 1—20 H. P. D. C. S. D. Lambert, Link Motion, 5 1/2 x8, and boiler.
- 1—6 H. P. D. C. S. D. Lidgerwood Hoist, 6 1/4 x8, and boiler.
- 1—40 H. P. S. D., 220-volt, D. C. Lidgerwood Builders' Hoist.
- 1—8 1/4 x10 H. P. S. S. S. D. Lidgerwood with boiler.
- 1—8 H. P. O. & S. Gasoline Hoist.

COMPRESSORS

- 1—1100-ft. Air, Sullivan.
- 1—60-ft. Air, Laidlaw D. G.
- 1—125-ft. Air, Chicago.
- 1—60-ft. Air, Nagle, new, belted.

ENGINES

- 1—120 H. P. Corliss, Slater.
- 1—100 H. P. Horizontal, Ames.
- 1—100 H. P. Horizontal, Taylor.
- 1—50 H. P. Horizontal, Ball.
- 1—35 H. P. Horizontal.
- 2—25 H. P. Horizontal.
- 2—20 H. P. Vertical.
- 2—15 H. P. Vertical.

BOILERS

- 2—80 H. P. Return Tubular.
- 3—125 H. P. Return Tubular.
- 2—100 H. P. Return Tubular.
- 2—150 H. P. Return Tubular.

PUMPS

- 1—800-gal. Worthington Duplex.
- 2—300-gal. Worthington Duplex.
- 8—Duplex and Triplex.
- 2—Centrifugal.
- 8—Rotary.
- 2—Deep Well.

TANKS

Copper, Pressure, Storage, Wooden, Iron and Mash.
One 18,000-gal. Steel Storage.

BLOWERS AND EXHAUSTERS

Sturtevant, Buffalo and Champion. 1—No. 3 Root Pressure.

COOKER

5000-gal. with Agitator.

BUCKET

3/4-yard Hayward Orange Peel.

ICE MACHINES

- 2—New Brunswick, 1-ton each Refrigeration, complete with tanks, coils and pipe.
- 1—5-ton Cleveland.

SAWMILLS

3—25 H. P. Geiser Boiler and Engines.
3 complete Sawmills for same.

DRYERS

1—Louisville with press.

LATHES

- 1—18"x12' Lodge & Shipley, quick change gears.
- 1—18"x14' New Haven, complete with gears.
- 1—15"x10' Lathe & Morse, complete with gears.

CABLE

7/8", 1", 1 1/8" and 1 1/4" Galvanized Wire.

Mallory Machinery Corporation

BALTIMORE, MD.

IMMEDIATE SHIPMENT Guaranteed Used Direct Current

MOTORS IN STOCK

H. P.	Speed.	Volts.	Make.	Qu.
30	900	230	Fairbanks-M.	2
20	900	230	Triumph	1
20	1150	250	Peerless	1
20	1200	220	Jantz-Leist	1
20	1210	500	Peerless	1
15	1150	230	Reliance	1
15	1200	230	Western	1
10	700	110	Western	1
10	975	220	Peerless	1
7 1/2	900	220	Crocker-W.	1
7 1/2	1400	250	Lincoln	1
6	500	110	Card	1
6	1465	220	Westg.	1
5	1100	230	Imperial	1
5	1125	230	Fairbanks-M.	1
5	1700	230	G. E. RC	1
5	1750	230	Northern	1
3	600	110	Lincoln	1
3	900/2200	220	Peerless	1
3	1150	230	Sprague	1
3	1500	110	Peerless	1
3	1650	115	Jenny	1
3	1700	230	G. E. RC	1
3	900	230	Westg.	1
2	1000	230	Paragon	1
2	1100	230	Western	1
2	1150	230	Sprague	1
2	1200	230	Westg.	1
1 1/4	1200	230	West.	1
1	1700	230	G. E. RC	1
1	2000	115	G. E. CQ	1
1	2450	110	Peerless	1
1	500	250	Crocker-W.	1
1	75	575	Western	1
1	20	800	Westg.	1

MOTOR GENERATOR SET.

IMMEDIATE SHIPMENT.

150 K. W., 250-volt, 580 R. P. M. USED Crocker-Wheeler Generator, with two-panel, black-slate NEW switchboard flexibly coupled to 200 H. P., 440-volt, 3-phase, 60-cycle, 580 R. P. M., squirrel-cage NEW Allis-Chalmers motor, with starting compensator; also 150 K. V. A., 2200 to 440-volt NEW Transformer.

THE ELLIOTT ELECTRIC CO.

322 Champlain Ave. Cleveland, O.

CORLISS ENGINE For Sale

One used 16 x 36 heavy duty left hand Corliss Engine, 150-H.P. at 125 pounds steam, 80 revolutions. Flywheel pulley 14 ft. x 24 inch face and belt pulley 11 ft. x 20 inch face on engine shaft. Immediate delivery.

The Wellman-Seaver-Morgan Co.
CLEVELAND, OHIO

75 HORSE MOTOR 16" OSCILLATING FANS

75 H. P. Allis-Chalmers, three-phase, 60-cycle, 440-volt, 865 revolutions, squirrel-cage motor, with starter and pulley; A-1 condition, like new; immediate shipment.

16" 4-blade Robbins & Myers Oscillating Desk and Bracket D. C. Fans, 110 Vs.; used, but in fine condition. Each.....\$12.00
Call on us for what you want in electrical equipment or supplies. Send us a list of what you have for sale.

Piedmont Electric Co.
Asheville, N. C.

ENGINES-GENERATORS.

1-500 K. W., A. C., 2300-volt, 3-phase, 60-cycle, Westinghouse, direct connected to four-valve compound engine, 300 R. P. M.
1-250 K. W., 220-250-volt, D. C. Engine and Generator.

GENERATORS.

1-100 K. W., D. C., 110-125-volt, 250 R. P. M., 2 bearings, rheostat, half coupling.
1-75 K. W., D. C., 250-volt, 200 R. P. M., 2 bearings, rheostat, half coupling and switchboard.

BELTED ENGINES.

1-8"x12" Buckeye Engine.
1-16"x30" Buckeye Engine.
1-20"x48" Lane-Bodley Corliss.

WATER TUBE BOILERS.

2-150 H. P. B. & W.
1-400 H. P. B. & W.

COMPRESSOR.

1-18"x18" Duplex Belt-Driven Laidlaw-Dunn-Gordon Air Compressor.

DOUBLE LEATHER BELTING

As follows:
1-Piece 18" wide 45' long.
1-Piece 20" wide 45' long.
1-Endless Belt 30" wide 103' long.

MOTORS.

1-75 H. P., A. C., 220 or 440-volt, 60-cycle, 3-phase, New.

PUMPS.

1-4 1/2"x4" Fairbanks-Morse Duplex Power Pump.

CASTLE & WILSON, 1601 Arrott Bldg., Pittsburgh, Pa.

IMMEDIATE DELIVERY

Two 150 KW. Sprague Generators
One 100 KW. Sprague Generator

D. C., 250 volts, direct connected to American Ball Duplex Compound Engines. Also, 25 to 150 K. W. direct connected 125 V. Sets.

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70 Fulton Street New York

New Motors? New Ventilating Fans? New Mine Locomotives? New Tanks?

I have them in Stock

HOWARD B. PAYNE

1003-1004 House Building Pittsburgh, Pa.

D. C. GENERATORS FOR SALE

25 K. W., 900 R. P. M., 125-Volt, Belted Peerless.
55 K. W., 850 R. P. M., 125-Volt, Belted Westg.
60 K. W., 275 R. P. M., 125-Volt, Engine Type, G. E.
60 K. W., 275 R. P. M., 250-Volt, Engine Type, G. E.

All in excellent condition, complete and fully guaranteed. Also large stock New and Used Motors and Generators.

V. M. NUSSBAUM & CO., Fort Wayne, Ind.

FOR SALE-Electric Motors

We make a specialty of, and have the largest stock of SECOND HAND electric MOTORS and GENERATORS in America,

and buy and sell, rent, exchange and repair electrical machinery of all kinds.

16th and Lincoln Streets, Chicago

NEW MOTORS

Immediate shipments from Atlanta Stock

One each 5, 7 1/2, 10, 25 and 30 H. P. General Electric 220 Volt 3-phase, 60 cycle motors. Offered subject to prior sale.

Seeger-Walraven Co.

Machinery and Mill Supplies

38 W. Alabama Street
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3 ph. 25 cy. 440 Volt SLIP RING MOTORS

3-112 H. P. General Electric "ITC," speed 750.

3-52 H. P. General Electric "ITC," speed 750.

1-37 1/2 H. P. General Electric "ITC," speed 750.

"HONESTLY REBUILT"

MILLER-OWEN ELECTRIC CO.
INC.

"Pittsburg's Electrical Clearing House"
PITTSBURG, PA.

EDGER FOR SALE

No. 1 1/2 A. L. H. Whelan Second-hand Edger Perfect Condition.

DILLON SUPPLY COMPANY
RALEIGH, N. C.

FOR SALE

FERTILIZER MACHINERY

1-1-Ton Reliable Fertilizer Mixer (new).
1-Newark Automatic Fertilizer Scale.
1-14" Belt Conveyor, 148'.

All A1 condition.

JOHN M. GREENE

261 Drexel Bldg. Philadelphia, Pa.

STEEL STORAGE TANKS

FOR PROMPT SHIPMENT

Subject prior sale

16-4200 gals., 8' 8"x9' 6", 3/16" shell, 3/16" hds.
5-8000 gals., 7'x28', 3/16" shell, 1/4" hds.
6-10,000 gals., 8'x28', 1/4" shell, 1/4" hds.
4-12,000 gals., 8'x32', 1/4" shell, 1/4" hds.
4-15,000 gals., 9'x32', 1/4" shell, 5/16" hds.
3-20,000 gals., 10'x35', 1/4" shell, 5/16" hds.

For shipment within six to eight weeks

10-9000 gals., 10'x15', 1/4" shell, 5/16" hds.
7-10,000 gals., 7'x40', 3/16" shell, 1/4" hds.

Send us your inquiries for small, medium and large size Tanks, also Stacks, Steel Barrels, etc. We can quote you.

STANDARD TANK CO.

15 Park Row New York, N. Y.

STEEL TANKS

1-54" diam. x 19'0".
1-36" diam. x 30'0".
1-36" diam. x 28'6".
1-60" diam. x 30'0".

HENRY POTTS & COMPANY

650 Real Estate Trust Building PHILA.

IMMEDIATE SHIPMENT

3-80 K. W., G. E., 25-cy., 3-ph. Eng. Sets, Boilers, etc. Complete Plant.
1-8375 K. V. A., 60-cy., 3-ph. Westg. Turbo.

1-312 K. V. A., 2300-v., 60-cy., 3-ph. Terry-Allis Turbo, with cond.; used two months. Can furnish Boilers, etc.; complete plant.

2-1000 K. W., 600-v., 60-cy., 3-ph. Allis Turbine.

1-1500/3000 K. W., 2300-v., 60-cy., 2-ph. Turbine, with sur. cond.

1-625 K. V. A., 600-v., 60-cy., 3-ph. Allis Low-Pressure Turbo.

1-300 K. W., 2300-v., 60-cy., 3-ph. Westg. Mixed-Pressure Turbo.

1-800 K. W., 480-v., 60-cy., 3-ph. Allis Engine Set.

1-1000 K. W., 550-v., cross-compound Engine Set.

1-550 K. W., 35-degree, 240-v., cross-compound Allis Engine Set.

4-75 H. P. NEW G. E., 900 R. P. M., 2300-v., 60-cy., 3-ph., form KT Motors.

1-150 H. P., G. E., 230-v. Hoist Motor, with controller.

1-500 H. P., 2300-v., 60-cy., 3-ph., 450 R. P. M. G. E. Motor.

1-200 H. P. and one 300 H. P., 440-v., 60-cy., 3-ph., Westg. Syn. Motor.

1-100 H. P., G. E., type R. C., 1000 R. P. M., 230-v., D. C. Motor.

1-1000 H. P., 300 R. P. M., 2080-v., 3-ph., 25-cy., G. E. Motor, with controller.

1-517 H. P., 150 lbs., class F Stirling Boiler.

ROSS POWER EQUIPMENT COMPANY
Indianapolis, Indiana

FOR SALE

USED MACHINERY

In Good Condition

ENGINES

1-150 H. P. Wheland Twin Engine.

2-75 H. P. Wheland Engines.

2-50 H. P. Wheland Engines.

1-40 H. P. Wheland Heavy-Duty Engine.

1-20 H. P. Pusey-Jones Vertical Engine.

1-50 H. P. Haberkorn Engine.

1-42 H. P. Shepard Vertical Engine.

2-25 H. P. American Blower Engines.

SAW MILL MACHINERY

1-32' Wheland Acme Saw Carriage.

28-Live Log Rolls, with angle boxes, gears and shafting.

35-23" to 72" Used Circular Saws.

MISCELLANEOUS

1-2" Forbes Pipe-Threading Machine.

1-10 1/2" to 24" C. I. Fittings, Valves, Ells, Tees and Flanges.

THE CHAMPION FIBRE CO.

Drawer C CANTON, N. C.

IRON AND STEEL PULLEYS FOR SALE

Lot of slightly used iron and steel pulleys—all sizes.

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STEEL BUILDINGS, many styles and sizes. CONNERSVILLE BLOWERS, also fan types. EXHAUSTERS, COMPRESSORS, PUMPS, CUPOLAS, TUMBLERS, GYRATORY RIDDLES, OPEN-FLAME BRASS MELTING FURNACES for gas or oil; no crucibles needed.

TRAVELING, JIB, ELECTRIC and hand-power Cranes and Derricks. ELEVATORS, HOISTS, HAULAGE OUT-FITS, belted or motor-driven. MOTORS, OIL, GAS and STEAM ENGINES, OXY-ACETYLENE WELDING OUTFITS, "Superior," moderate priced. MACHINE TOOLS, IRON, BRASS and woodworking machinery. COMPLETE LINE FOUNDRY EQUIPMENT.

SAWMILLS, MINE CARS, Special Machines, etc.

Buy and sell New and Used Machinery.

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1-94 Kv.-a. Non-Condensing

Turbo-Alternator Set

Consisting of Type "G" Single-Stage TERRY Steam Turbine, running at 3600 R. P. M., and direct connected through flexible coupling, and mounted on same base with 94 K. V. A., 100% P. F., 480-volt, 60-cycle, 3-phase alternating-current ALLIS-CHALMERS Generator. Shipping weight approximately 7500 lbs.

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ELECTRIC ELEVATORS FOR SALE

Electric Elevator complete; never been used. Capacity 3500 pounds. Speed 25 ft. per minute. Platform 8 ft. wide by 18 ft. long, suitable for lifting light automobile two or three-story building.

Also, Electric Freight Elevator. Platform 6 ft. x 6 ft. Capacity 2500 pounds. Speed 50 ft. per minute. Address

GEORGE SPITZMILLER

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Contractors Machinery

1-18x42 Heavy-Duty Corliss Engine, 1000 H. P., 2300-v., 60-cy., 3-ph. drive.

1-22x42 Heavy-Duty Corliss Engine, 1000 H. P., 2300-v., 60-cy., 3-ph. drive.

1-50 H. P. Fairbanks-Morse Oil Engine.

1-120 K. W., 2200-volt Bullock Pedestal Motor.

Generator, 3-phase, 900 R. P. M.

100 H. P., 80 H. P., 70 H. P. Tubular Boilers.

1-1000 H. P. Cochran Feed Water Heater.

Pumps, Tanks.

2-72x100-ft. Smokestack, 1/4x16 steel.

Harlan & Harlan Machine Works

Kansas City, Mo.

1-16x10 Rand Imperial, type No. 11, 400 H. P., Belted Air Compressor.

1-Chicago Pneumatic Portable Gasoline driven Air Compressor, 196 cu. ft., 115 H. P.

1-8" Lawrence Direct-current Pump, direct connected to a 25 H. P., 220-volt G. E. motor, direct current.

2-Brown Hoisting Machinery Company 1/2 yard Clam-Shell, Single-Line Buckets.

1-1200 Closed Feed-Water Heater.

6-150 H. P. H. T. Butt-Strapped Boilers.

2-250 H. P. Mosher Water-Tube Boilers, 15 lbs. pressure.

Consolidated Machinery & Wrecking Company

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For Sale Hoisting Engine

Stationary 8 1/4x10 double-cylinder double drum Hoisting Engine, with independent swinger; engine 4x6, with 40 H. P. boiler, stiff-leg derrick, 1 1/4 yd. clam-shell bucket, complete; immediate delivery; practically new.

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CYLINDER

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SCRAP IRON & STEEL

Avoid trouble by selling to an old-established, reputable concern.

We will pay the maximum prices allowed by the Government on nearly all grades, resting satisfied with the commission in Government allows the consumers to pay brokers as our profit.

A. M. WOOD & CO., Inc.
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SANDER FOR SALE

One two-drum, 24-inch Empire Sander, in good as new. This Sander is made by W. A. Heath Machine Co. Address

The Scott Register Co., New Bern, N. C.

First-Class Used Machinery

For Every Conceivable Kind of

BORING MACHINES

DRILLS

GEAR CUTTERS

HAMMERS

Machinery
Engine, 100
Engine, 100
Oil Engine,
Pedestal Motor,
P. M.
Tubular Boilers,
Water Heater,
3-16 steel.
Machine Work
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96 cu. ft., 175
Pump, 220-volt G. I.
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1-42-in. 3-Drum Invinible Sander.
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1-48-in. 3-Drum Columbia Sander.
1-48-in. H. B. Smith Endless-Bed Sander.
1-54-in. 2-Drum Egan Sander.
1-54-in. 1-Drum Boss Sander.
1-30x 6-Fay 6-Roll Double Surfer.
1-30x 6-Woods 6-Roll Double Surfer.
1-30x 6-Rogers 6-Roll Double Surfer.
1-30x 6-900 6-Roll Double Surfer.
1-30x 6-Egan Cabinet Planers.
1-30x 7-Smith Cabinet Planer.

Woodworking Machinery of All Kinds
Engines and Boilers

THE CLEVELAND BELTING & MACHINERY CO.
1922 Scranton Road
Cleveland, O.

BARREL MILL FOR SALE

One complete Tight and Loose
Barrel Plant, with a capacity
of 500 barrels per day. Includes
a short log mill, and is ar-
ranged to make staves from
sawn and split stock.

MACHINERY EXCHANGE CO.
NEW ORLEANS, LA.

Delivery Now

16"x6" Marvel Head Lodge & Shipley Engine
Lathe.
Landis 10"x30" Plain Grinder, with Universal
Headstock.

Two Brown & Sharpe No. 3 26" Automatic
Gear Cutters.

Ingle Automatic Gear Tooth Chamfering
Machine.

24" Cincinnati High-Speed Shaft-Driven Up-
right Drill, with Gear Box and Tapping
Attachment.

Universal Swivel Table for Radial Drill.

One 36" Safety Wet Tool Grinder.

No. 1 Diamond Bench Grinder on pedestal.

Dry Grinder for two 12" wheels.

Head Style "C" Drill Grinder.

One 24" Rockford Wet Tool Grinder.

Globe Tool Sharpener.

Triplex Single-Acting Vertical Dean Pump,

4 1/2" bore, 4" stroke.

36"x36"x24" L. W. Pond Planer. Two heads
on cross rail.

The Lodge & Shipley Machine Tool Co.
Cincinnati, Ohio

CEMENT PLANT MACHINERY

Immediate Shipment

1-600 hp. Allis Engine.

7-30" Single Roll Griffen Mills
with Steel Bins.

2-60"x22" Allis-Chalmers Tube
Mills with Steel Bins.

2-48"x26" Rotary Cylinder Slag
Dryers.

1-36"x24" Rotary Cylinder
Lime Dryer.

1-48"x40" Rotary Cylinder
Cooler.

7-Bucket Elevator Conveyors.
500 ft. of 12" Screw Conveyors.

THE STRUTHERS
FURNACE COMPANY
Cleveland Ohio

FOR SALE

FIRST CLASS

Used Machinery

Logging, Railroad, Sawmill, Planing Mill,
Cableway, Power Plant, Yard, Fire Protec-
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Equipment, including following and many
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BOILERS—Battery of four 100 H. P. Boilers,
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CABLEWAY ENGINE—Lidgerwood 12x12 Ca-
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DRY KILNS—Complete two-room dry kilns.

DRAG SAW—Hill No. 7 Steam Drag Saw,
with steam hoist.

FOUNDRY—Whiting No. 2 1/2 Cupola and
Complete Foundry Equipment.

GRINDER—Covel No. 90 Band Saw Grinder,
with filing clamp.

LOG JACKER—Extra heavy Spur and Bevel
Gear Drive.

LOG TURNER—Overhead.

MOLDER—Woods No. 107 Inside Molder.

PLANNER AND MATCHER—American No.
223 Planner and Matcher.

PREPARATOR—Kraetzer Steel Cylinder
Preparator.

RESAW—Six-foot Diamond Horizontal Re-
saw.

SHINGLE MACHINE—Challoner 10-Block
Shingle Machine.

SPRINKLER—Grinnell Automatic Sprinkler
System complete.

If interested, write for complete booklet
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Santee River Cypress Lumber Co.
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Railroad and Contractors' Equipment and Supplies.

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Eight pair 18-inch, heavy cast Car Wheels,
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100 H. P. Horizontal Boiler, 17 feet by 5
feet 3 inches, fixed with 50 4-inch tubes, com-
plete with all fittings, and in first-class con-
dition; made by Cummer & Son, Cleveland,
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Standard orange peel Dredging Bucket;
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Derrick, with 30' boom, mounted on steel
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Derrick Car, care of Manufacturers Record,
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Consisting No. 5 Gates Gyratory Crusher,
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60" centers; 60 H. P. Internally-Fired Boiler,
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Double cylinder, 8 1/2"x10; 2 drums, 14x23.
Capacity 9000 pounds, single line. Inde-
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Address
COLBER, care of Manufacturers Record

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1-10-ton, 4-wheel Industrial Crane; single line for fall block and hook work.
1-20-ton Brown Hoist, 8-wheel, M. C. B., 45-ft. boom, 2-yard Brown Hoist clam-
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2-Baldwin standard-gauge, saddle tanks; one 33-ton, the other 35-ton; cylinders
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Ingersoll-Rand duplex, two-stage, steam driven, capacity 1190 ft. air at 110 lbs.
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4-200 H. P. (Heine type) Water Tube Boilers.
1-30 H. P. Locomotive type Portable Boiler and Engine mounted on iron wheels,
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1-Marine type 100 H. P. Freeman Internal Fired Portable Boiler; diameter, 54
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Closed Steel Upright Storage Tank, 10 ft. 6 in. diameter, 9 ft. 9 in. high, capacity
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4-1-yard capacity "V"-shaped, steel Two-Way Dump, 30" gauge.

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2-Marsh-Capron 3/4-yard, with steam engines and boilers mounted on wheels;
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1-Marsh-Capron 1-yard, mounted on steel skids (no power), charging hopper,
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1-Lot Concrete Spouting, size 14 1/2" wide, 9 3/4" deep, hopper connections.

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Lambert, 10x12 double cylinder, single drum, 36-in. dia., 24-in. face; drum grooved;
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DERRICK HOISTS

2-Byers, 16 H. P. double cylinders, double drum, equipped with rollers and swing-
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2-Lidgerwood No. 7 1/2 Skeleton Hoisting Engines, 7x10 double cylinder, double
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1-American 5 1/2x8 double cylinder, double drum, with boiler and swinging gear.

1-American 7x10 double cylinder, double drum, with boiler.

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2-50 K. W. General Electric, direct connected to Ball engines; complete with all
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425 ft. 3/4-in. (one piece) plow steel. 850 ft. 1/2-in. (one piece) plow steel.
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Two Foote Continuous Concrete Mixers,
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Two 72"x18" H. R. T. Boilers, 135 pounds
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Standard and Narrow Gauge.

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Full complement of angles for above.

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1-26-ton Davenport S. T., 4 ft., 8 1/2-in.
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14-14-ton Porter S. T., 36-in. gage, 140-lb.
steam. Overhauled.

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2-8-ton Davenport S. T., 24-in. gage, 140-
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15-36 ft., 60,000 cap., 4 ft. 8 1/2 in. gage.

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4-100,000 Cap. Hopper Bottom Ore Cars.

Practically New.

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1-16x16 Rice right-hand, heavy duty 8-
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First-class. Priced right.

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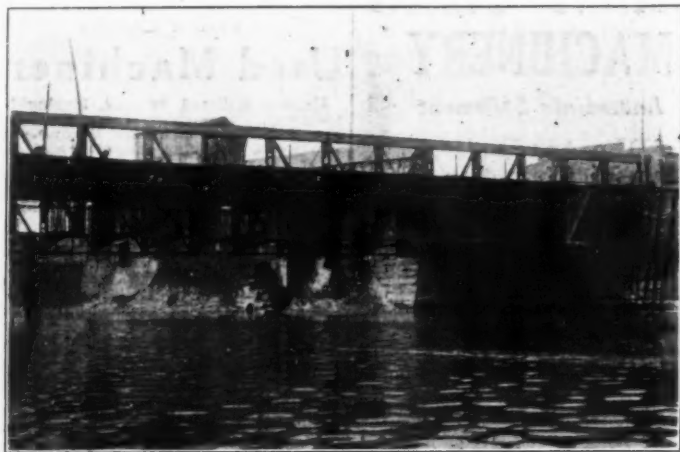
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- 40 Standard and 36" gauge modern direct-connected Locomotives in all types and weights from 8 to 75 tons.
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- 30 Miles 35-lb. and 40-lb. Rails at Jacksonville, Fla.

Birmingham Rail & Locomotive Co. Birmingham, Ala.

FOR SALE

- 1-Model 28 Marion Full Circle Shovel.
- 1-50' Marion Floating Dredge.
- 1-Parsons Trench Machine, steam driven, cuts 30"x12".
- 1-No. 3 Keystone Excavator.
- 1-80 H. P. Locomotive Type Boiler, butt strap, triple riveted.
- 1-95 H. P. Locomotive Type Boiler, butt strap, triple riveted.
- 1-16 H. P. Vertical Boiler.
- 2-72x16' Erie City H. T. Boilers.
- 1-66x16' Erie City H. T. Boilers.
- 1-10x12' Erie City Steam Engine.
- 1-20 H. P., D. C. Cook Gasoline Engine.
- 2-500 H. P. Rusk Water-Tube Boilers, equipped with Westinghouse Chain Grate Stokers; 135 lbs. pressure if reinstalled.
- 1-9x12 D. C., S. D. Otis Hoist.
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- 10-24" gauge, 1 1/4-yard Continental Dump Cars.
- 2-24" gauge, 1 1/4-yard Continental Dump Cars.
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3 1/2-Yd. Bucyrus Dredge

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22 tons of good second-hand relaying rails.

500 ft. of 4" O. D. second-hand Iron Pipe.

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Immediate delivery, one No. 2 Thew revolving Steam Shovel, on standard-gauge trucks. Just overhauled; practically good as a new shovel. Delivery Augusta, Ga.

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To close estate, 8-in. string of tools complete; buildings to cover each and wagon to carry same.

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COMPRESSORS	Price
1-12x12x16 Ingersoll, straight-line, steam-driven, capacity about 300' at 80 to 100 lbs.	\$ 000
1-Sullivan, 2-stage air, simple-steam, capacity 1800' at 80 to 100 lbs.	2500
1-14x16x10x16 Sullivan, 2-stage air, simple-team, capacity 600' at 80 to 100 lbs.	1500
1-14x9x10 Bury, 2-stage, belt-driven, capacity 350'	1500
1-Ingersoll-Rand Imperial Type XB2, 500'	2000
1-Sullivan, 2-stage, belt-driven, 1400', good as new, f. o. b. St. Louis.	4500

CARS	Price
30-4-yd. Western, 2-way, contractors' 36"-gauge, wooden bodies, each.	\$ 125
30-2 1/2-yd. steel-bodied, end-dump Quarry Cars, 48"-gauge, each.	75
70-2 1/2-yd. steel-bodied, end-dump Quarry Cars, 36"-gauge, each.	80
20-12-yd. Western, standard-gauge MCB, air-dump Cars, almost new, each.	1050
20-12-yd. Western, standing-gauge, MCB, air-dump Cars, good condition, each.	900
50-1 1/2-yd. Koppel "V"-shaped, 24"-gauge. Steel Cars, new, each.	120

CRUSHERS	Price
1-No. 9, Style "K," almost new.	\$7000
2-No. 5 Austins, one straight and one angle drive, both fine condition, each.	1500
1-No. 6, Style "D," Gates, fine condition each.	1500
1-No. 7 1/2 Austin, almost new.	2800
1-10x20 Blake Jaw Crusher, on skids.	800
1-10x18 Good Roads Machinery Jaw Crusher, on wheels, with 22' elevator.	800
1-9x16 Universal on skids, almost new.	500
2-18x24 Blake Jaw Crushers, very heavy type.	2000

ELEVATOR AND SCREENS	Price
1-No. 5 Gates, 70' centers, almost new.	\$ 700
1-No. 7 1/2 Austin, 62' centers, fine condition.	900
1-No. 9, with 36" buckets, good condition, without belt.	900
1-Stephens & Adamson Stone Screen, 42"x16' with dust jacket, practically new.	700
1-48"x18' Austin Screen, with dust jacket.	800
1-48"x20' McCully Screen, with dust jacket.	900

CLAM SHELL BUCKETS

1—¾-yd. Owen, with teeth, almost new..	\$ 450
1—1½-yd. Hayward, first class.....	650
1—1-yd. Browning.....	500
1—1½-yd. Page Dragline.....	500
1—2-yd. Brown Hoist Clam.....	750

CRANES

1-5-ton, 4-wheel Vulcan Bucyrus, single-line crane.....	\$6000
1-10-ton Browning, 4-wheeled, with bucket.....	9000
1-15-20-ton McMyler, 4-wheels, with stability wheels on ends of axles, good as new.....	13,000
1-25-ton Industrial, 8-wheeled, 50' boom, 1½-yd. Clam Shell; perfect condition.....	24,000

HOISTING ENGINES

1-7x10 Lidgerwood D.C., D.D., with boiler	\$1100
1-7x10 Lambert, 3-drum, with boiler.	1600
1-8x12 Mundy, D.C., D.D., with boiler.	1300
1-9x10 Lidgerwood, 3-drum, 32" drums, without boiler.	2000
with boiler.	2300
1-Clyde 9x10, 3-drum, with boiler, f. o. b. Mich.	2500
1-5x8 D.C., D.D., Reversible O.&S., with vertical engine, without boiler.	350
with boiler.	550
1-7x10 Lambert D.C., D.D., with boiler.	1100
1-12x14 D.C., D.D., Slackline Cableway Engine, new	2000
1-8 1/4 x10 Lidgerwood D.C., D.D., with boiler	1600

LOCOMOTIVES

1-9x14 Vulcan, 36"-gauge, saddle tank..	\$1250
1-9x14 Vulcan, 36"-gauge, saddle tank..	1350
1-19x24 Baldwin, 10-wheeler, 60 tons....	8000
1-18x24 American, 10-wheeler.....	6500
1-17x24, 6-wheel switcher.....	7500
1-18x24 Mogul, 45-ton.....	10,000

DRAGLINES

1—Monighan-Walker Steam Machine, with 50'-boom, 1½-yd. bucket, almost new..	\$7000
1—Flory Outfit Engine, 10x12 heavy drag-line type boiler, firebox 150 lb. pres-	

	Price
sure, boom 60', steel bucket, 2-yd.; new,	
1917.	\$9000

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400 Tons—35-lb., with angle bars.....	\$57
1500 Tons—56-lb., with angle bars.....	58
100 Tons—75-lb., with angle bars.....	55

PUMPS

1-10" Morris, sand, belt-drive.....	\$ 500
1-8" Morris, water, belt-drive.....	300
1-20x14x10 Worthington Duplex.....	600
1-Wilson-Snyder Water-Works Pump, complete with condenser.....	2500

STEAM SHOVELS

1—No. 0 T Tw traction with 5/8-yd. dipper, fine condition	\$4000
1—No. 1 Vulcan Revolving Shovel, standard gauge, with 3/4-yd. dipper, good as new	4500
Same as above, with 35'-crane boom ..	5500
1—45-ton Bucyrus, standard gauge, 1 1/4-yd. dipper	6500
1—Model 60 Marion, with 2 1/2-yd. dipper	7000
1—70-ton Bucyrus, with 2 1/2-yd. dipper	6000

CABLEWAYS

1—9x10 Ligerwood, 3 drum engine and boiler and carriage and part of other fittings, no rope.....	\$3000
1—50-H.P. Flory D.D. Electric, with carriage and fittings, but no rope.....	3000
1—7x10 Flory Steam, D.C., D.D., with boiler, carriage and all fittings, but no rope	1950

BOILERS

1-25 H.P. Vertical American Hoist and Derrick	\$ 250
1-40 H.P. Firebox, on steel truck.	550
1-50 H.P. Vertical Butt Strap.	750
1-60 H.P. Vertical Lidgerwood.	800
1-200 H.P. Erie Water Tube, Hartford Insurance, at 150-lb. pressure.	2500
2-200 H.P. Marine Boilers, good for 150-lb. pressure, complete. Price, \$12.00 per H.P.	

ENGINES

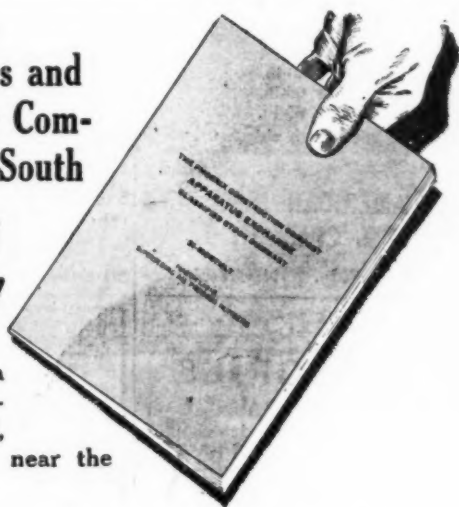
1—11x16 Erie Slide Valve, good as new..	\$ 300
1—18x36 Allis-Chalmers Heavy Duty R.H., good as new.....	2000

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We would like to mail you this list regularly. We compile it from the lists of disposable equipment sent in by large companies at regular intervals, and issue it bi-monthly. It gives condensed data on each item in the Apparatus Exchange, serial number of data sheet having fuller details of each piece of machinery or material, prices, and the names and addresses of owners with whom you negotiate direct. It will pay you to sit down and

Write now for the latest Stock Summary

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- 1—Marion 91 standard gauge 4-yard dipper.
- 1—Marion 75 standard gauge 4-yard dipper.
- 1—Marion 70 standard gauge 2½-yard dipper.
- 1—Bucyrus 70-C standard gauge 2½-yard dipper.
- 1—18-B Bucyrus full revolving caterpillar traction, ¾-yard dipper.

DITCHERS

- 2—Keystone Excavators.

LOCOMOTIVES

- 2—15-ton 9x14 36-in. gauge Dinkeys.
- 6—18-ton 10x16 Dinkeys, 36-in. gauge.
- 1—Fate Gasoline Locomotive, 3-ton, 36-in. gauge.

CARS

- 138—4-yard Western Cars, 36-in. gauge, steel and wood beam.
- 4—6-yard standard-gauge Western.

HOISTS, DERRICKS, BOILERS, CONCRETE MIXERS, Etc.

We have a large stock of thoroughly repaired construction equipment of all kinds ready for immediate shipment.

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HOISTING ENGINES

- 1—Lidgerwood, 14x18, D. C., three tandem drum, suitable for cableway.
- 1—Shannon, 7½x10, D. C., D. D., with boiler.
- 1—Mundy, 6½x10, D. C., D. D., skeleton.
- 2—Mundy, 6½x10, D. C., D. D., with boilers.
- 1—National, 5½x10, D. C., D. D., with boiler.

STATIONARY ENGINE

- 1—350 H. P. Green Slide Valve Engine, equally as good as new, size 22"x48" wheels 16"x32".

BOILERS

- 3—American-built, Scotch type marine boilers, 12'6" dia. by 20' long, double end, three corrugated furnaces each end, 160 lbs steam.
- 1—350 H. P., horizontal return tubular Boiler, 125 lbs steam.

STEEL BUILDING

- 100'x70', practically new, 6 bays, 16'8", 39' in clear.

ANCHORS

- 10—new mushroom Anchors, 5000 lbs. each.

PIPE

- 6000 ft., strictly first class 6" wrought-steel Pipe, equally as good as new.
- 700 ft. strictly first class 20" dia. steel-ripped flange Pipe, lengths 20' each.
- 400 ft., 24" dia., 30' lengths, equally as good as new.

STEAM SHOVELS

- 1—65-ton Bucyrus, 2½-yd. dipper, standard gauge.
- 1—No. 1 Thew Traction Steam Shovel, ¾-yd. dipper.

CENTRIFUGAL PUMPS

- 1—Morris No. 12, 14" suction, 12" discharge, direct connected to horizontal engine, 18x10, 4500 gallons capacity per minute.
- 1—Belt-driven, 8" suction, 6" discharge, 1000 gallons capacity, 125' head.
- 34—Standard gauge car trucks, four wheel; wheels 24" diameter, in first-class second-hand condition.

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- 600 tons strictly first class, 30-lb. relaying rails with 4-hole angle bars. We have a large tonnage of all weight rail from 20 to 100 lb. relayers; pass any inspection.

- 1—Logging Engine, size 7x10, D. C., D. D., with boiler.
- 1—36" gauge, 28-ton Climax Locomotive, North Carolina delivery.

Henry A. Hitner's Sons Co.

Station K

Philadelphia, Pa.

Special—Immediate Delivery

MACHINERY FOR MOVING MATERIALS

STANDARD GAUGE LOCOMOTIVES

- 5—Vulcan 4-wheel 12"x16" Saddle Tanks, weighing 25 tons.
- 2—American 4-wheel 14"x24" Saddle Tanks, weighing 35 tons.
- 1—American 4-wheel 17"x24" Slope Tender, weighing 40 tons.
- 1—Baldwin 4-wheel 18"x24" Slope Tender, weighing 50 tons.
- 1—American 6-wheel 17"x24" Slope Tender, weighing 45 tons.
- 1—Baldwin 6-wheel 17"x24" Slope Tender, weighing 50 tons.
- 2—American Moguls, 18"x24", Square Tender, weighing 55 tons.
- 1—Baldwin Mogul, 19"x26", Square Tender, weighing 65 tons.
- 1—American Mogul, 19"x24", Square Tender, weighing 60 tons.

The above locomotives have been thoroughly overhauled.

36" GAUGE LOCOMOTIVES

- 6—Porter 4-wheel 9"x14" Saddle Tanks, contractors' type.
- 2—Vulcan 4-wheel 9"x14" Saddle Tanks, contractors' type.
- 3—Vulcan 4-wheel 10"x16" Saddle Tanks, contractors' type.
- 6—Porter 4-wheel 11"x16" Saddle Tanks, contractors' type.
- 1—Baldwin Consolidation 15"x20" Square Tender, weighing 38 tons.
- 1—American Forney, 10"x16", weighing 25 tons, 2-4-4 type.
- 2—Vulcan 10-wheel 14"x20" Square Tenders, weighing 35 tons.

STANDARD GAUGE CARS

- 50—Flat Cars, 50,000-pound capacity, 35' long, M. C. B.
- 30—Flat Cars, 60,000-pound capacity, 36' long, M. C. B.
- 42—Gondolas, 80,000-pound capacity, 35' long, M. C. B.
- 25—Hoppers, 80,000-pound capacity, 35' long, M. C. B.
- 23—Box Cars, 60,000-pound capacity, 36' long, M. C. B.
- 2—Steel Flats, 100,000-pound capacity, 40' long, M. C. B.
- 19—Oliver Dump Cars, 12-yd. capacity, 23' long, M. C. B. air brakes.

RAIL

- 500—tons 45 and 50-lb. Rail.

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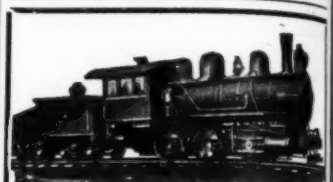
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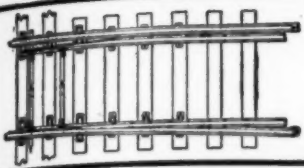
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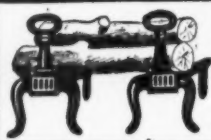
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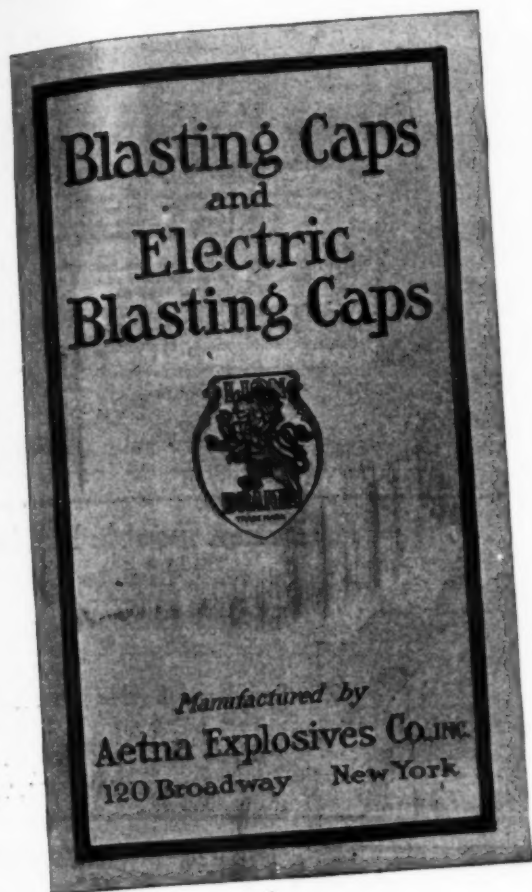
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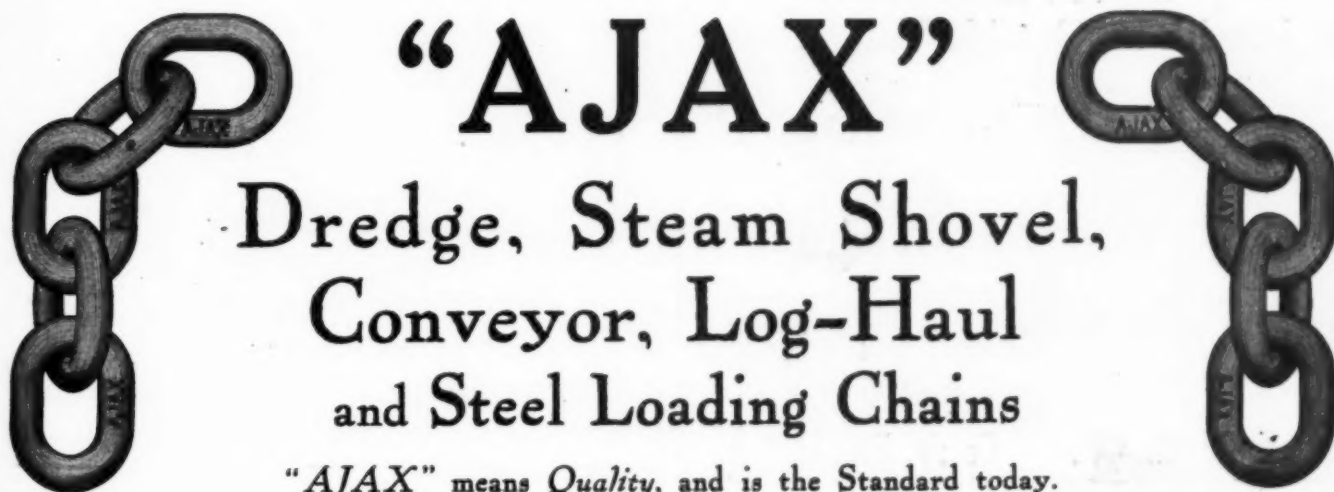
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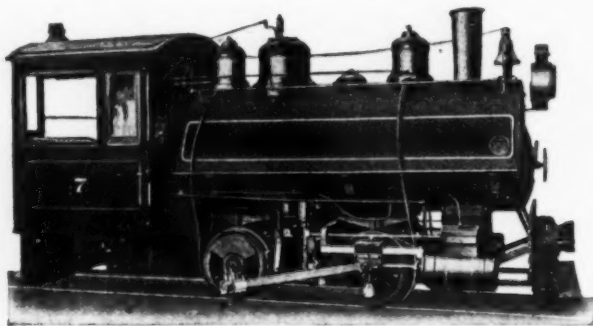
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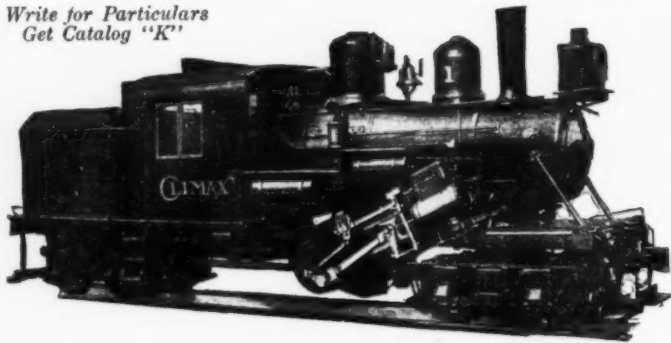
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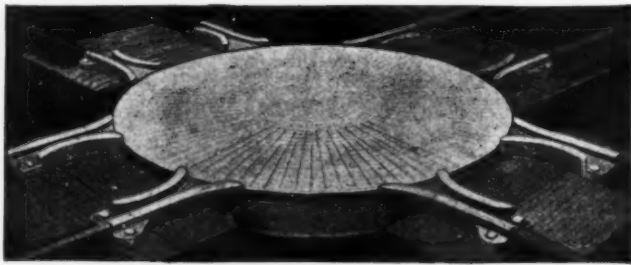


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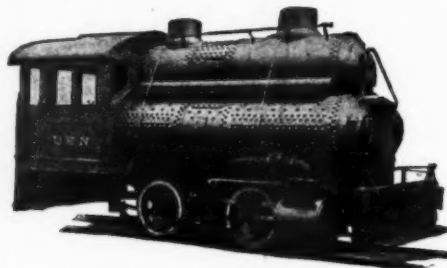
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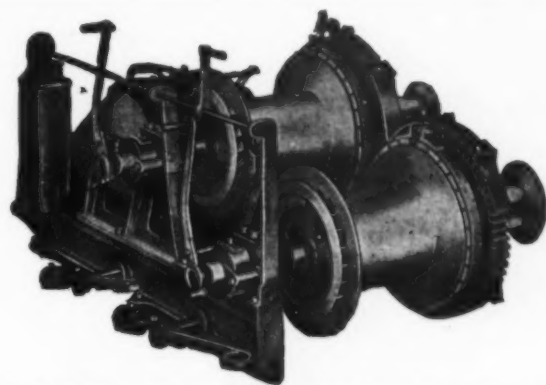
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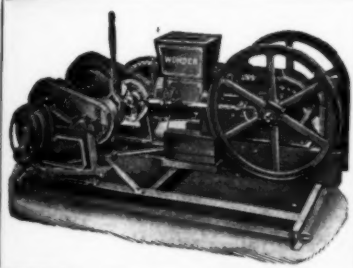
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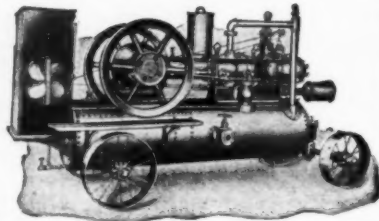
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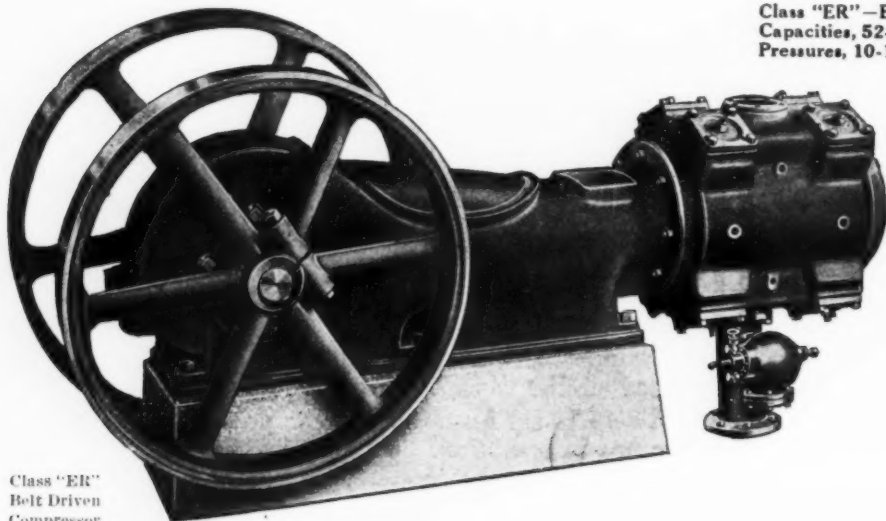
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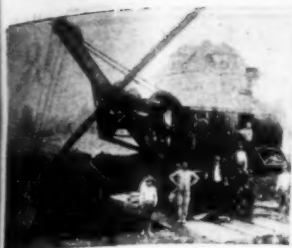
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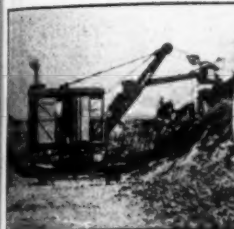
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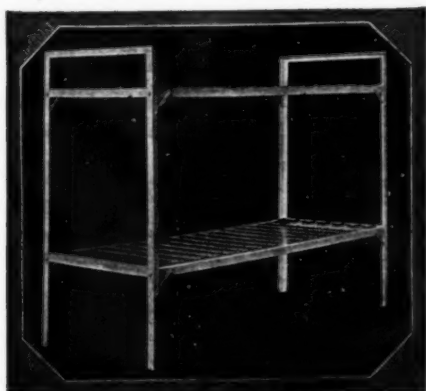
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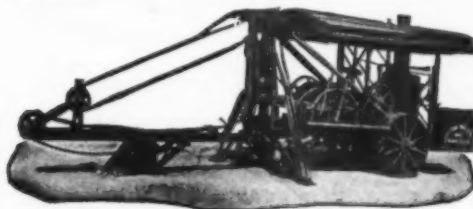
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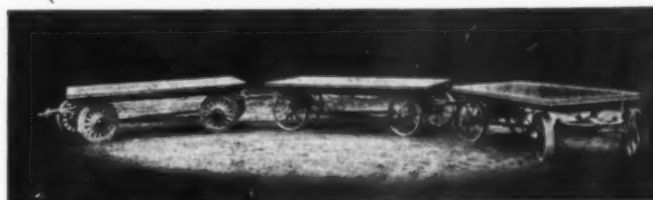
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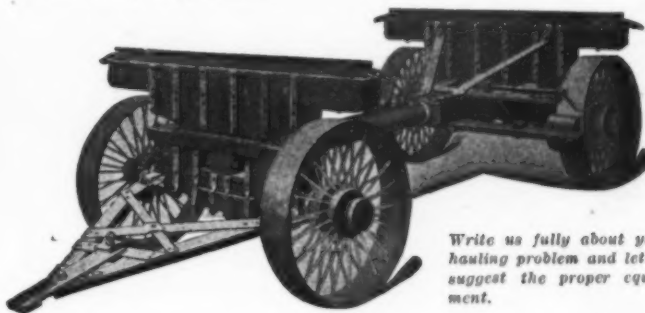
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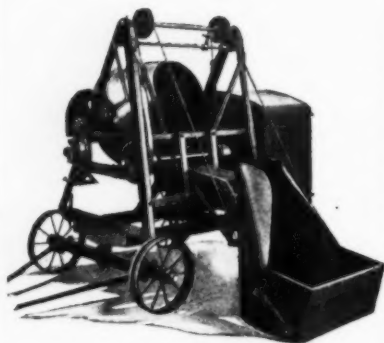
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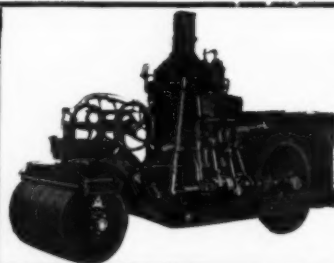
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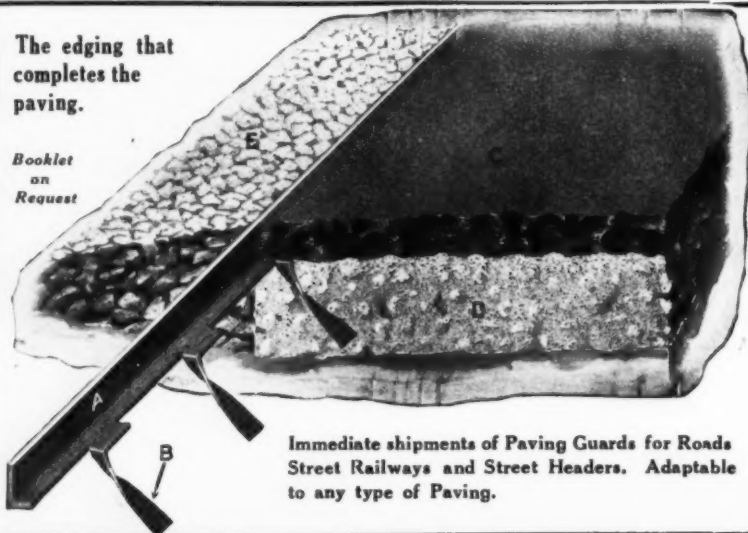


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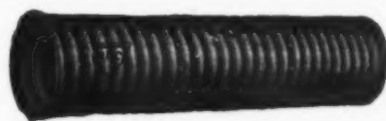
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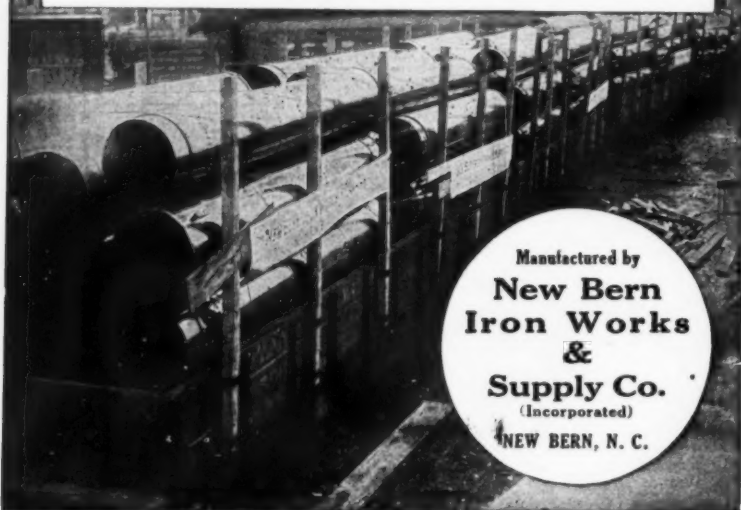
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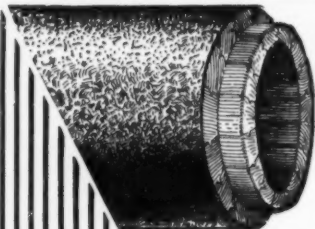
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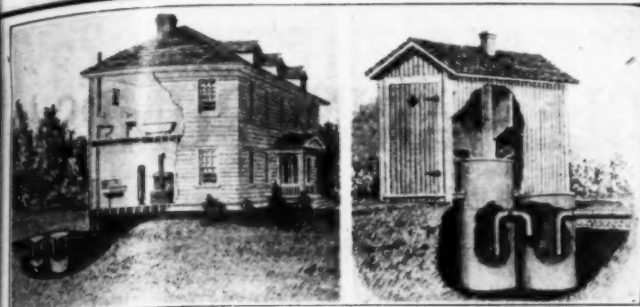
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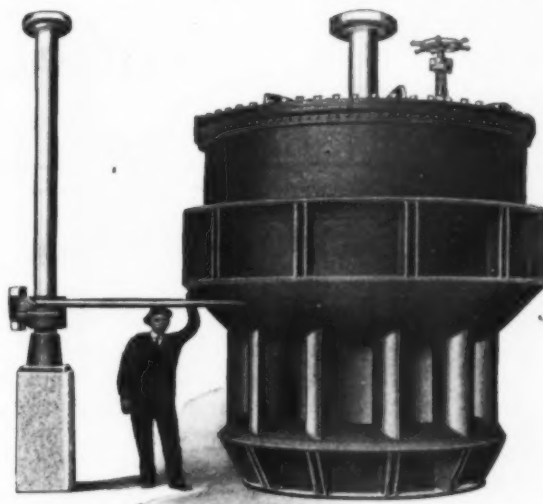
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.80	16 ft.	200	9,730	267.20	90.70
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WRITE FOR BULLETIN 54

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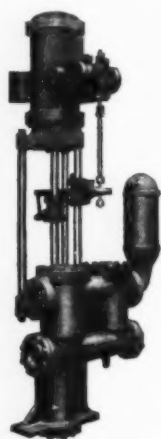
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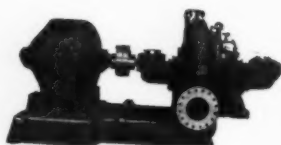
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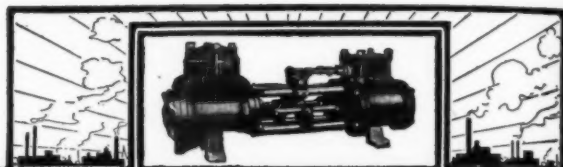
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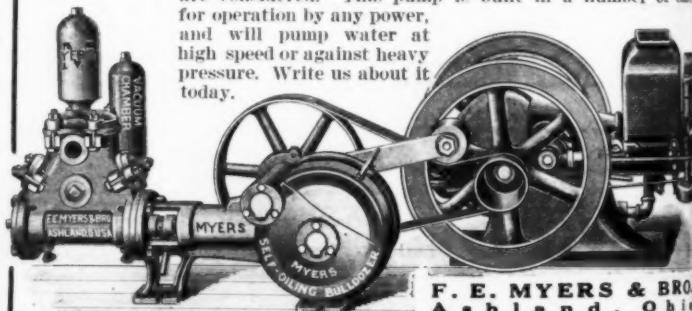
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These pumps can be furnished for belt drive, motor drive or direct connected to steam engines as required.

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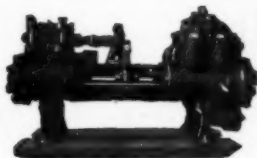
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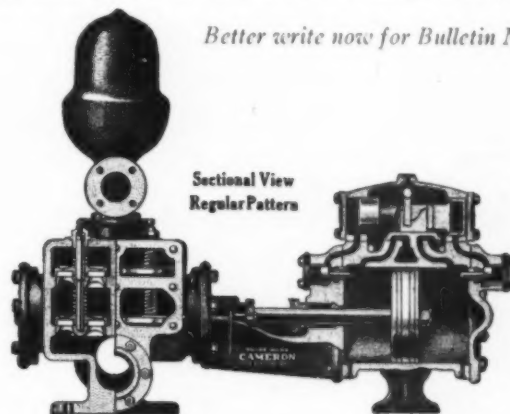
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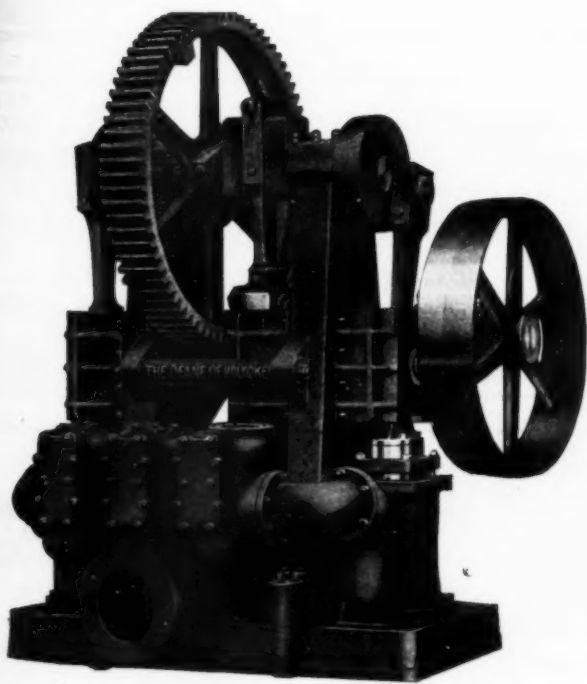
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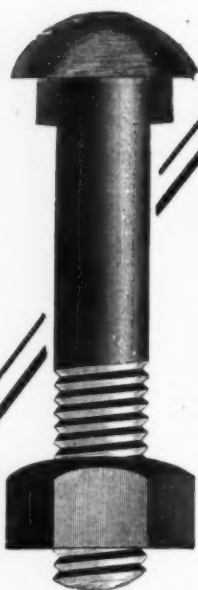
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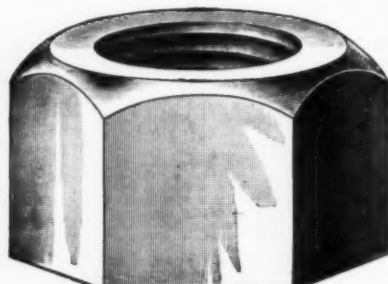
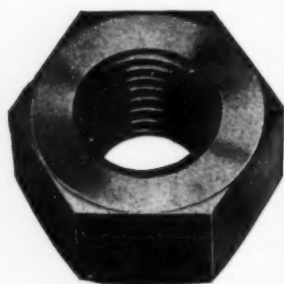
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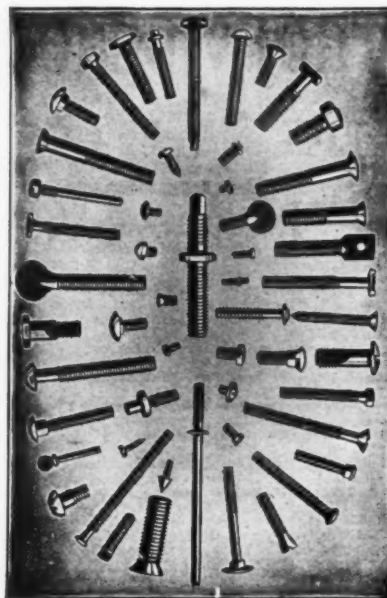
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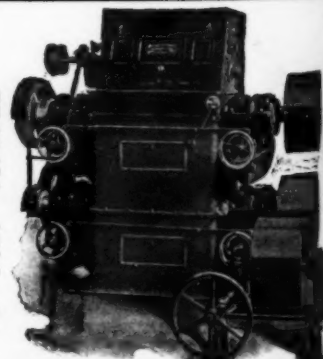
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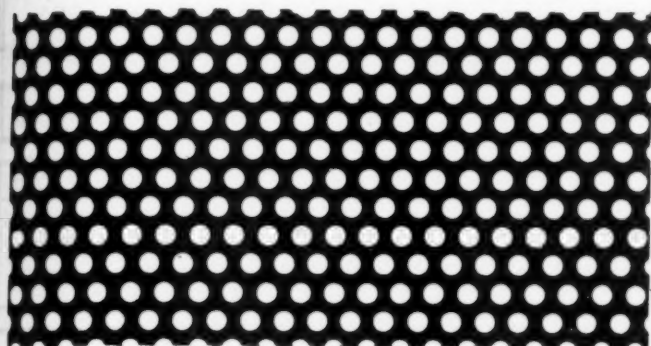
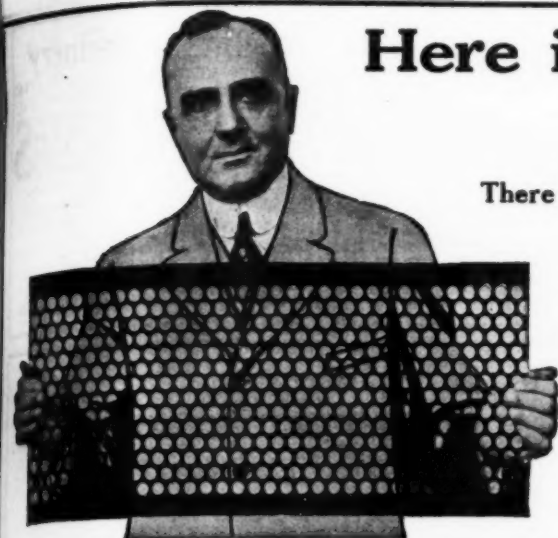
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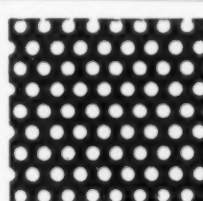
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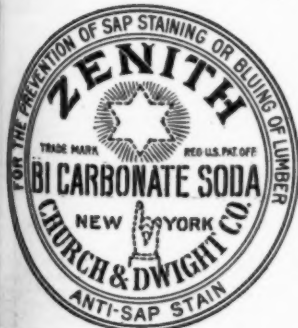
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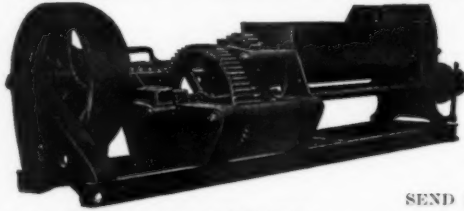
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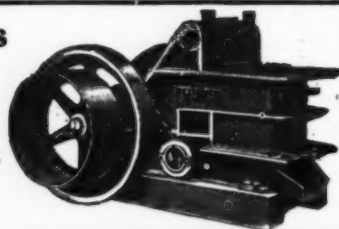
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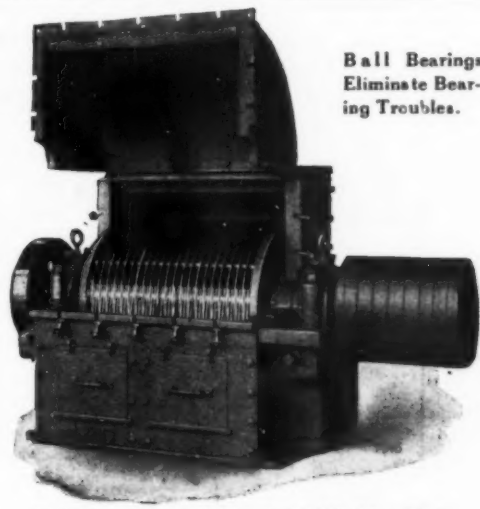
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BALL BEARING

For Use in

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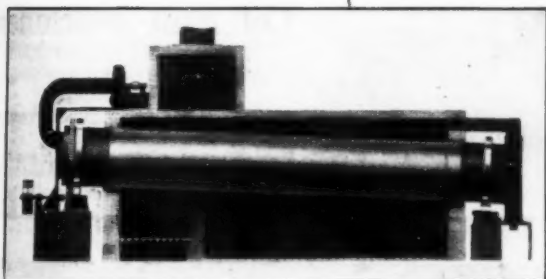
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**AMERICAN RING
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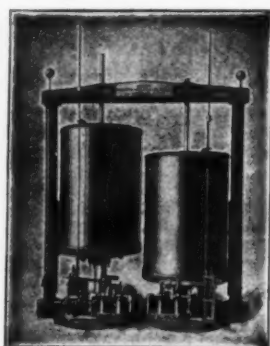
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American Pulverizer Co.

Cor. 18th and Austin Streets, ST. LOUIS, MO.

WE CRUSH EVERYTHING WHY CAN'T YOU DO IT?



Oil Mill Machinery

for Cottonseed, Linseed, Mustard Seed, Rape Seed, Soya Bean, Castor Bean, Sesame and Copra.

Hydraulic Presses
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Latest and Most Approved Types
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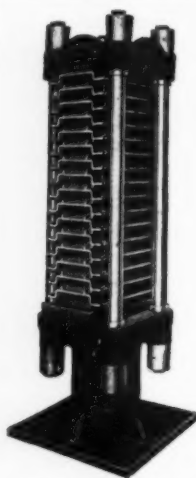
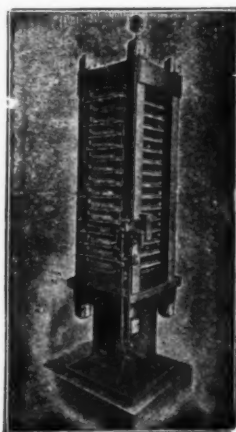
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ATTRITION MILLS—with Patented Wave Line Plate in which a groove cannot be worn—for hot or cold cake.

ACCUMULATOR SYSTEM—The only perfect one devised.

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Manufacturers of Complete Equipments
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DALLAS, TEXAS ATLANTA, GA., U. S. A.
ENGINEERS AND BUILDERS

COMPLETE MODERN OIL MILL EQUIPMENT

Pneumatic Seed Cleaners
Automatic Linters
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Mechanical Cookers
Automatic Steam Cake Formers
All Steel Hydraulic Presses
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Everything for an Oil Mill

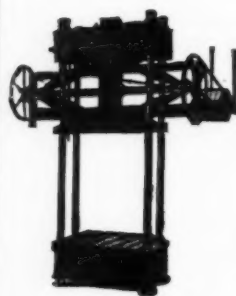
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Size—to suit your needs.
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WE MANUFACTURE A FULL LINE OF

OIL MILL MACHINERY

Cotton Seed, Linseed, Rape-seed, Olive, Peanut, Castor, Fish & Lard Oil
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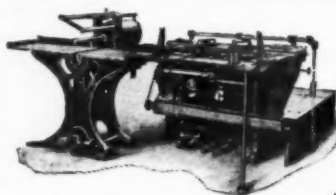
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ESTABLISHED 1876
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Oil Mill Machinery

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Specialists in Humidity and Temperature Regulation.

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For Woodworking Factories and Dust Producing Machinery.
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That's what eats the profits of a Saw Mill.
Replace the Friction Feed with a Soule
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Palatial Steel Steamers Between Baltimore and Norfolk, Portsmouth and Old Point, Va.

Steamers leave both ends of the line 6.30 P. M. every week day.

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Special Meals and a la carte service.

RUNNING WATER AND HARDWOOD FLOORS in all staterooms. BRASS BEDS in double rooms, and METALLIC BERTHS with BRASS MOUNTINGS and FOLDING UPPER BERTHS in single rooms; PRIVATE BATHROOMS.

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STEAMSHIP DE LUXE

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Between Baltimore, Old Point and Norfolk. Every week day.

YORK RIVER

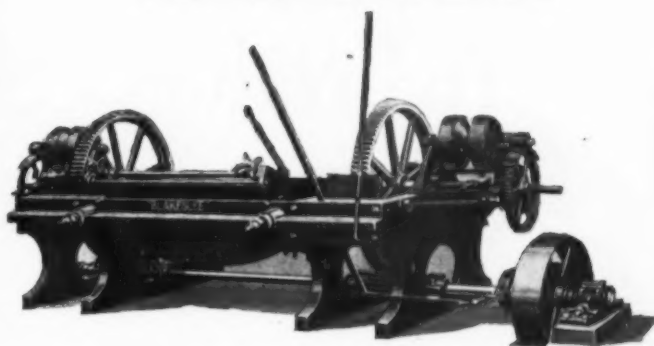
Between Baltimore, West Point, Richmond every night in the year except Sunday night. Our big new steamers, "City of Richmond," "City of Baltimore," "City of Norfolk" and "City of Annapolis," furnish the very best accommodations.

Good meals, rooms with bath and all the comforts of home.

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VENEER LATHE

For the Manufacture of

General Line of Veneers, Box Shooks,
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A "Blakeslee" lathe will cut 18,000 to 28,000 ft. Log Scale, according to diameter of blocks, every 10-hour day into $\frac{3}{8}$ " and $\frac{1}{2}$ " Box Shooks, producing them to width, thickness and length in one operation by the use of our special features which increases output and saves labor and material.

American-Blakeslee Mfg. Co.

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MANUFACTURER and DISTRIBUTOR

Abundant supplies of coal, coke, iron, timber and other raw materials lie in the regions of Georgia and Alabama, which are traversed by the

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Cheap electric power, numerous undeveloped water-powers, good home markets and excellent shipping facilities. Therefore, manufacturing conditions are ideal.

Many of the cities on the Central of Georgia Railway occupy advantageous positions for distributing warehouses, and a number of the larger northern and eastern manufacturers supply their southeastern trade from branch houses in these cities.

Full and detailed information upon application.

J. M. MALLORY, Industrial Agent
SAVANNAH, GEORGIA

The Nation's Supply of Livestock Is Being Rapidly Diminished

An examination of livestock figures, comparing the resources of the country today with those of previous years, is startling.

The following table indicates that, with an increase of population in the United States, between 1900 and 1918, of nearly 40 per cent., the number of cattle, sheep and hogs shows a serious decline:

TOTAL NUMBER OF MEAT ANIMALS IN THE UNITED STATES.

	1918. Jan. 1 estimate.	1900 Census.
Milch cows.	23,284,000	17,135,633
Other cattle.	43,546,000	50,585,777
Sheep.	48,900,000	61,503,713
Swine.	71,374,000	62,868,041
Total meat animals.	187,104,000	192,093,164

The population of this country has increased from 75,000,000 in 1900 to 105,000,000 in 1918.

In considering the above and bearing in mind that it is necessary to send vast quantities of meat products abroad for our Allies, as well as for our fighters on the battlelines of Europe, the supreme need of bending every energy to add to our meat resources is readily seen.

This message cannot be delivered too strongly. It is absolutely vital to the life of the Nation. We are called upon to feed not only ourselves, but our Allies and our own fighting men.

In Florida there are great areas of idle land where livestock can be grazed twelve months in the year, and where, because of the ideal climate, no expensive housing is required. Florida presents an opportunity to the raiser of livestock which should not be overlooked.

We will be glad to supply information.

MODEL LAND COMPANY OF THE FLAGLER SYSTEM

JAMES E. INGRAHAM, President

ST. AUGUSTINE, FLA.

A Large and Well-Known Manufacturer Wrote Us a Few Days Ago as Follows:

"It might interest you to know that after spending a number of years in attempting to develop the color of our porcelain from imported clays, both from the South of England and Germany, that we discovered the North Carolina clay to be superior in color and properties to anything that can be imported. We are quite proud of being the pioneers in the development of porcelain entirely from domestic raw materials. Of course, you will understand in making this statement we refer to production in large quantities. We are at the present time manufacturing over a million pieces per week of one type alone."

MINERALS

Dolomite
Limestone
Marble
Granite
Sandstone
Quartzite
Iron Ore
Manganese
Bauxite
Zinc
Chromite
Nickel
Feldspar
Quartz
Silica
Clays
Kaolin
Salt
Gypsum
Mica
Asbestos
Ochre
Barytes
Phosphate
Soapstone
Talc
Corundum
Graphite

BY-PRODUCTS

Chlorite Schist
Mica Schist
Mica Flake
Scrap Mica
Feldspar
Sand
Chicken Grit
Roofing Grit
Concrete Facings
Parting Sand
Foundry Facings
Iron Oxide

Raw Materials for War Industries

THERE is no section of our country of equal area that can boast of a greater variety of raw products of commercial value than that portion of the Southern Appalachian region traversed by the Clinchfield Railway.

This territory is fast becoming a diversified manufacturing district because of these extensive raw materials, backed up by cheap power furnished by the nearby coal fields that are almost inexhaustible and the many water-power sites available on the rivers for hydro-electric developments. The vast forests contain millions of feet of lumber, and thousands of cords of wood, both hard woods and soft woods.

Chemical, Electrochemical and Metallurgical, as well as Woodworking plants, will find favorable manufacturing conditions, including raw materials, building materials, good labor, cheap power and excellent distribution facilities. A close personal investigation of the resources in the Clinchfield territory is invited.

TIMBER

Oak
Hickory
Maple
Beech
Birch
Sycamore
Basswood
Buckeye
White Pine
Yellow Pine
Chestnut
Poplar
Spruce
Hemlock

BY-PRODUCTS

Wood Ashes
Sawdust
Hardwood Slabs
Spent Acid Chips
Calcium Carbonate

BUILDING MATERIALS

Cement
Lime
Brick
Tile
Gravel
Sand
Lumber

POWER

Hydro-electric
Steam-electric
Steam

FUEL

Coal
Coke

WATER POWER

Thousands of Horse Power are going to waste. It is at the source of valuable raw materials and can be developed at a reasonable cost.

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Carolina, Clinchfield and Ohio Railway

Industrial Department

D. C. BOY, Acting Industrial Agent

JOHNSON CITY, TENN.

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Black & Co., Baltimore, Md.

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Valley Iron Works, Williamsport, Pa.

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Barrett Adding Machine Co., Philadelphia, Pa.

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Hammond-Bird Co., The, Birmingham, Ala.
International Sales Corporation, Wash., D. C.

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Carrier Engineering Corp., New York, N. Y.

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Ingersoll-Rand Co., New York, N. Y.
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Nagle Corliss Engine Works, Erie, Pa.
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Sullivan Machine Co., Chicago, Ill.
United Machine Works, New York, N. Y.
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Sirlin, J. E., Greenville, S. C.

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Burnap, Geo., Washington, D. C.
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Dufur & Co., Baltimore, Md.

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CAST IRON.
American Cast Iron Pipe Co., Birmingham, Ala.
Cast Iron Pipe & Foundry Bureau, New York, N. Y.
Glasgow Pipe & Foundry Co., Lynchburg, Va.
U. S. Cast Iron Pipe & Fdrg. Co., Burlington, N. J.
Wood & Co., R. D., Philadelphia, Pa.

CULVERTS. (Corrugated Metal.)
American Sheet & Tin Plate Co., Pittsburgh, Pa.
Armco Iron Cl. & Flume Mfrs. Ass., Cincinnati, O.
Cotton Culvert & Silo Co., The Canton, O.
Tennessee Metal Culvert Co., Nashville, Tenn.

CURE PROTECTOR. (Steel.)
TrusCo Steel Co., Youngstown, Ohio.

CUTTER GRINDERS.
Vittrified Wheel Co., Westfield, Mass.

CUTS. (Half Tone, Line, etc.)
Alpha Photo Engraving Co., Baltimore, Md.

CYANIDE PLANT EQUIPMENT.
Pacific Tank & Pipe Co., San Francisco, Cal.

DERRICKS AND DERRICK FITTINGS.
Beckwith Machinery Co., Pittsburgh, Pa.
Byers Mach. Co., The John F., Havenna, O.
Buffalo Holst & Derrick Co., New York, N. Y.
Hayward Co., The, New York, N. Y.
Insley Machine & Silo Co., Indianapolis, Ind.
Monaghan Machine Co., Chicago, Ill.

DESIGNERS AND ILLUSTRATORS. (Printed Matter.)
Alpha Photo Engraving Co., Baltimore, Md.

DESKS. (Factory and Public Schools.)
American Seating Co., Chicago, Ill.

DIAMONDS. (For Mechanical Purposes.)
Desmond-Stephen Dresser Co., The, Urbana, O.

DITCHING MACHINERY.
Ball Engine Co., Erie, Pa.
Bay City Dredge Works, Bay City, Mich.
Buckeye Traction Ditcher Co., Findlay, Ohio.
Fairbanks Steam Shovel Co., Marion, O.
Hayward Co., The, New York, N. Y.
Monaghan Machine Co., Chicago, Ill.
Osgood Co., The, Marion, O.
Sauerman Bros., Chicago, Ill.

DOORS AND SHUTTERS. (Steel Rolling.)
Detroit Steel Products Co., Detroit, Mich.

DOORS. (Steel Rolling, Etc.)
Edwards Mfg. Co., Cincinnati, O.
Kinross Mfg. Co., Columbus, O.
David Lupton's Sons Co., Philadelphia, Pa.

DOYLE BEAMERS.
Ams Machine Co., Max, Bridgeport, Conn.

DRAFTSMEN'S SUPPLIES.
Weber & Co., F., Philadelphia, Pa.

DRAG SAWS. (Gasoline.)
Chickasaw Coopers Co., Memphis, Tenn.

DREDGING. (River, Harbor Improvement.)
Atlantic, Gulf & Pacific Co., New York, N. Y.

DRILLS.
Bartlett & Snow Co., The C. O., Cleveland, O.
Machinery Utilities Co., New York, N. Y.

DRILLING CONTRACTORS.
Pennsylvania Drilling Co., Pittsburgh, Pa.

DRILLS.
ELECTRIC.
Independent Pneumatic Tool Co., Chicago, Ill.
Black & Decker Mfg. Co., The, Baltimore, Md.

DRUMS.
Independent Pneumatic Tool Co., Chicago, Ill.

PROSPECTING.
Ingersoll-Rand Co., New York, N. Y.

ROCK AND MIXING.
Ingersoll-Rand Co., New York, N. Y.
Jeffrey Mfg. Co., Columbus, O.
Sullivan Mchry. Co., Chicago, Ill.

TRIST.
McKenna Brass & Mfg. Co., Inc., Pittsburgh, Pa.

DROP FORGINGS.
American Forging Co., Birmingham, Ala.
American Spiral Pipe Works, Chicago, Ill.
Lakeside Forge Co., Erie, Pa.

DROP FORGING MACHINERY.
Bliss Co., E. W., Brooklyn, N. Y.

DRUMS. (Steel.)
Standard Tank Co., New York, N. Y.

DRY DOCKS. (Builders of.)
American Bridge Co., New York, N. Y.
Foundation Co., The, New York, N. Y.

DRYING APPARATUS.
Carroll Engineering Corp., New York, N. Y.

DRYING MACHINERY.
American Process Co., New York, N. Y.
Bailey-Lebby Co., The, Charleston, S. C.
Bartlett & Snow Co., The C. O., Cleveland, O.
Buffalo Forge Co., Buffalo, N. Y.
Clarge Fan Co., Kansasmo, Mich.
Conover Mfg. Co., The, New Kensington, Pa.
Hersey Mfg. Co., South Boston, Mass.
Louisville Drying Mchry. Co., Louisville, Ky.
Ruggles-Coles Engr. Co., York, Pa.

DRY KILNS.
Buffalo Forge Co., Buffalo, N. Y.

DRY KILN EQUIPMENT.
Moore Dry Kiln Co., L., Jacksonville, Fla.

DRY KILN EQUIPMENT.
Moore Dry Kiln Co., L., Jacksonville, Fla.

DUMBWAITERS. (Hand Power.)
McKenna Brass & Mfg. Co., Inc., Pittsburgh, Pa.
Snyder Co., Owen T., Columbus, Ohio.
Standard Elect. & Elev. Co., Inc., Baltimore, Md.
Speidel, J. G., Reading, Pa.

DUMP BOXES.
Everett Mfg. Co., Newark, New York.

DUMP WAGONS.
Western Wheeled Scraper Co., Aurora, Ill.

DUST-COLLECTING SYSTEMS.
Buffalo Forge Co., Buffalo, N. Y.
Savannah Blow Pipe Co., Savannah, Ga.
Shreveport Blow Pipe & S. I. Works, Ltd.
Shreveport, La.

DUSTPROOFING. (Concrete.)
Sonneborn Sons, Inc., L., New York, N. Y.

DYESTUFFS.
Wolf & Co., Jacques, Passaic, N. J.

DYNAMITE. (Industrial and Agricultural.)
Aetna Explosives Co., Inc., New York, N. Y.
Atlas Powder Co., Wilmington, Del.
De Pont de Nemours & Co., E. I., Wilmington, Del.

DYNAMOS AND MOTORS.
General Electric Co., Schenectady, N. Y.
Pan Electric Mfg. Co., St. Louis, Mo.
Phillips, Leo A., New York, N. Y.
Standard Elect. & Elev. Co., Inc., Baltimore, Md.
Wagner Elect. Mfg. Co., St. Louis, Mo.

ELECTRIC LIGHTING FIXTURES.
Mitchell Electric Co., Inc., New York, N. Y.

ELECTRIC MACHINERY. (Dynamo, Generators, Motors, etc.)
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Blount & Co., J. L., Birmingham, Ala.
Carroll Electric Co., Washington, D. C.
Doubleday-Hill Electric Co., Washington, D. C.

XUM

Elliott Electric Co., Cleveland, Ohio.
General Electric Co., Schenectady, N. Y.
Gregory Electric Co., Chicago, Ill.
Klein & Co., Nathan, New York, N. Y.
Lincoln Electric Co., Cleveland, Ohio.
Monarch Electric Motor Co., New York, N. Y.
O'Brien Machinery Co., Philadelphia, Pa.
Pan Electric Mfg. Co., St. Louis, Mo.
Piedmont Electric Co., Asheville, N. C.
Sachsenmaier & Co., Geo., Philadelphia, Pa.
Schroeder Electric Co., Knoxville, Ind.
Standard Electric Co., Inc., Baltimore, Md.
Stewart, S. J. (Electric), New Orleans, La.
Wagner Elect. Mfg. Co., St. Louis, Mo.
Western Electric Co., New York, N. Y.
Westhouse Elect. & Mfg. Co., E. Pittsburgh, Pa.
Wilson Machinery Co., St. Louis, Mo.

ELECTRICAL CONTRACTORS' INSTRUMENTS AND SUPPLIES.

Booth Felt Co., Inc., Brooklyn, N. Y.
Carroll Electric Co., Washington, D. C.
Doubleday-Hill Electric Co., Washington, D. C.
General Electric Co., Schenectady, N. Y.
Piedmont Electric Co., Asheville, N. C.
Standard Elect. & Elev. Co., New York, N. Y.
United Machine Works, New York, N. Y.
Weston Electrical Instrument Co., Newark, N. J.

ELECTRICAL CONDUITS.

National Metal Molding Co., Pittsburgh, Pa.

ELECTRICAL MACHINERY.

Phillips, Leo A., New York, N. Y.

ELECTRICAL MACHINERY REPAIRING.

(Motors, Generators, etc.)
Charlotte Elec. Repair Co., Charlotte, N. C.

ELECTRIC LIGHT PLANTS. (Portable.)

Edison Storage Battery Co., Orange, N. J.
Lucy Mfg. Co., New York, N. Y.
Schroeder Electric Co., Evansville, Ind.

ELEVATORS.

Mathews Gravity Carrier Co., Ellwood City, Pa.

ELECTRIC.

American Elev. & Mch. Co., Inc., Louisville, Ky.
K. C. Elevator Mfg. Co., Kansas City, Mo.
Kimball Bros. Co., Council Bluffs, Iowa.
Moffatt Mch. Mfg. Co., Charlotte, N. C.
Otis Elevator Co., New York, N. Y.
Snyder Co., Owen T., Columbus, Ohio.
Spindel, J. G., Reading, Pa.
Standard Elev. & Elev. Co., Inc., Baltimore, Md.
Wareaw Elevator Co., Baltimore, Md.

HAND AND HELT POWER.

American Elev. & Mch. Co., Inc., Louisville, Ky.
K. C. Elevator Mfg. Co., Kansas City, Mo.
Kimball Bros. Co., Council Bluffs, Iowa.
Moffatt Mch. Mfg. Co., Charlotte, N. C.
Otis Elevator Co., New York, N. Y.
Snyder Co., Owen T., Columbus, Ohio.
Spindel, J. G., Reading, Pa.

HYDRAULIC.

American Elev. & Mch. Co., Inc., Louisville, Ky.
K. C. Elevator Mfg. Co., Kansas City, Mo.
Moffatt Mch. Mfg. Co., Charlotte, N. C.
Otis Elevator Co., New York, N. Y.

PORTABLE FOR WAREHOUSES, ETC.

Economy Engineering Co., Chicago, Ill.

STEAM HYDRAULIC.

Otis Elevator Co., New York, N. Y.
Hidway & Son Co., The, Contessville, Pa.

ELEVATOR BUCKETS.

Alvey-Ferguson Co., Inc., Cincinnati, Ohio.
Baldwell & Son Co., H. W., Chicago, Ill.
Hendrick Mfg. Co., Carbondale, Pa.
Jeffrey Mfg. Co., Columbus, Ohio.
Link-Belt Co., Philadelphia, Pa.

ELEVATOR ENCLOSURES AND CABS.

Bolles Iron & Wire Works, J. E., Detroit, Mich.
Dow Wire & Iron Works, Inc., Louisville, Ky.
Dufur & Co., Baltimore, Md.
Meyers Mfg. Co., The, Fred, J., Hamilton, Ohio.
Otis Elevator Co., New York, N. Y.

EMERY WHEEL STANDS.

Webster & Perks Tool Co., The, Springfield, O.

ENAMELS.

Arco Co., Cleveland, Ohio.

ENGINEERS.

AGRICULTURAL.

Morse, Stanley F., New Orleans, La.

APPROVAL.

Allison, Walter A., Philadelphia, Pa.
American Agency Co., The, Milwaukee, Wis.
Black & Veatch, Kansas City, Mo.
Day & Zimmerman, Inc., Philadelphia, Pa.
Ford, Bacon & Davis, New York, N. Y.
Howell & Son, David J., Washington, D. C.
Industrial Engineering Corp., Hazard, Ky.
Kinneer & Co., W. S., New York, N. Y.
Meade & Co., Richard K., Baltimore, Md.
Weller, Francis R., Washington, D. C.

BLAST FURNACES.

Fuller Engineering Co., Allentown, Pa.
Guernsey & Co., John B., Roanoke, Va.
Huckner & Co., John B., Roanoke, Va.
Smythe Co., The, S. R., Pittsburgh, Pa.

BRIDGES.

Concrete Steel Bridge Co., The, Clarksburg, W. Va.
Concrete-Steel Engr. Co., New York, N. Y.
Foundation Co., The, New York, N. Y.
Freeland-Klyce Engr. Co., Nashville, Tenn.
Gardner & Howe, Memphis, Tenn.
Hedrick & Hedrick, Kansas City, Mo.
Kinneer & Co., W. S., New York, N. Y.
Luten, Daniel B., Indianapolis, Ind.

CEMENT MILL.

Fuller Engineering Co., Allentown, Pa.
Meade & Co., Richard K., Baltimore, Md.

CHEMICAL.

Abbott, William G., Jr., Wilton, N. H.
Birmingham Mach. & Fdry. Co., Birmingham, Ala.
Dow & Smith, New York, N. Y.
Foundation Co., The, New York, N. Y.
Gilbert, N. A., Allentown, Pa.
Inst. of Industrial Research, Inc., Wash., D. C.
Little, Inc., Arthur D., Cambridge, Mass.
Meade & Co., Richard K., Baltimore, Md.
Nelson, Jr., Wm. P., New Orleans, La.
Pittsburgh Testing Laboratory, Pittsburgh, Pa.
Thiele, Ludwig A., Columbus, Ohio.

CIVIL.

Arnold Co., The, Chicago, Ill.
Brackett, F. Ernest, Cumberland, Md.
Clark & Krebs, Charleston, W. Va.
Concrete-Steel Engr. Co., New York, N. Y.
Foundation Co., The, New York, N. Y.
Gardner & Howe, Memphis, Tenn.
Hall & Sons, B. M., Atlanta, Ga.
Howell & Son, David J., Washington, D. C.
Kinneer & Co., W. S., New York, N. Y.
Knowles, Morris, Pittsburgh, Pa.
Meade & Co., W. E., Pittsburgh, Pa.
White Companies, J. G., New York, N. Y.

DAMS.

Byllesby & Co., H. M., Chicago, Ill.
Cooper & Co., Hugh L., New York, N. Y.
Foundation Co., The, New York, N. Y.
Gardner & Howe, Memphis, Tenn.
Main, Chas. T., Boston, Mass.
Moore & Co., W. E., Pittsburgh, Pa.
Weller, Francis R., Washington, D. C.
White Companies, J. G., New York, N. Y.

DRAINAGE AND IRRIGATION.

Brett Eng. & Contracting Co., Norfolk, Va.
Ford, Bacon & Davis, New York, N. Y.
Knowles, Morris, Pittsburgh, Pa.
Spray Engr. Co., Boston, Mass.

EFFICIENCY.

Abbott, William G., Jr., Wilton, N. H.
Inst. of Industrial Research, Inc., Wash., D. C.
Little, Inc., Arthur D., Cambridge, Mass.
Meade & Co., W. E., Pittsburgh, Pa.
Nelson, Jr., Wm. P., New Orleans, La.

ELECTRICAL.

Abbott, William G., Jr., Wilton, N. H.
Arnold Co., The, Chicago, Ill.
Cooper & Co., Hugh L., New York, N. Y.
Friend & Weber, New Orleans, La.
Industrial Engineering Corp., Hazard, Ky.
Lide, Martin J., Birmingham, Ala.
Moore & Co., W. E., Pittsburgh, Pa.
Stone & Webster, Boston, Mass.
Tucker & Laxton, Charlotte, N. C.
Westhouse, Church, Kerr & Co., New York, N. Y.
White, Gilbert C., Charlotte, N. C.
Wiley & Wilson, Lynchburg, Va.

ELECTRIC LIGHT AND POWER PLANTS.

Black & Veatch, Kansas City, Mo.
Byllesby & Co., H. M., Chicago, Ill.
Cooper & Co., Hugh L., New York, N. Y.
Ford, Bacon & Davis, New York, N. Y.
Foundation Co., The, New York, N. Y.
Graves Engr. Co., Inc., New York, N. Y.
Moore & Co., W. E., Pittsburgh, Pa.
Schodfeld Engr. Co., Philadelphia, Pa.
Stone & Webster, Boston, Mass.
Weller, Francis R., Washington, D. C.
Westhouse, Church, Kerr & Co., New York, N. Y.
White Companies, J. G., New York, N. Y.
Wiley & Wilson, Lynchburg, Va.

GAS.

Allison, Walter A., Philadelphia, Pa.
Byllesby & Co., H. M., Chicago, Ill.
Ford, Bacon & Davis, New York, N. Y.

GEOLOGICAL.

Clark & Krebs, Charleston, W. Va.
Davis, Geo. C., Philadelphia, Pa.
Froehling & Robertson, Richmond, Va.
Institute of Indust. Resch., Inc., Wash., D. C.
Mines Efficiency Co., Duluth, Minn.

HYDRO-ELECTRIC.

Byllesby & Co., H. M., Chicago, Ill.
Cooper & Co., Hugh L., New York, N. Y.
Foundation Co., The, New York, N. Y.
Kinneer & Co., W. S., New York, N. Y.
Knowles, Morris, Pittsburgh, Pa.
Main, Chas. T., Boston, Mass.
Moore & Co., W. E., Pittsburgh, Pa.
Seaford Engineering Co., Philadelphia, Pa.
Silline, J. E., Greenville, S. C.
Tucker & Laxton, Charlotte, N. C.
Weller, Francis R., Washington, D. C.
White Companies, J. G., New York, N. Y.
Wiley & Wilson, Lynchburg, Va.

INDUSTRIAL PLANT.

Abbott, Wm. G., Jr., Wilton, N. H.
Austin Co., The, Cleveland, Ohio.
Brackett, F. Ernest, Cumberland, Md.
Brooks Engr. Co., J. L., Montrie, Ga.
Concrete Steel Bridge Co., The, Clarksburg, W. Va.
Day & Zimmerman, Inc., Philadelphia, Pa.
Dixie Engineering & Insulating Co., Atlanta, Ga.
Foundation Co., The, New York, N. Y.
Friend & Weber, New Orleans, La.
Fuller Engineering Co., Allentown, Pa.
Gardner & Howe, Memphis, Tenn.
Institute of Indust. Resch., Inc., Wash., D. C.
International Conveyor Corp., The, Wash., D. C.
Kinneer & Co., W. S., New York, N. Y.
Little, Inc., Arthur D., Cambridge, Mass.
McKee & Co., Arthur G., Cleveland, Ohio.
Main, Chas. T., Boston, Mass.
Meade & Co., Richard K., Baltimore, Md.
Moore & Co., W. E., Pittsburgh, Pa.
Nelson, Jr., Wm. P., New Orleans, La.
O'Brien, Arthur D., Cambridge, Mass.
Rust Engineering Co., The, Pittsburgh, Pa.
Seaford Engineering Co., Philadelphia, Pa.
Shearer, C. E., Memphis, Tenn.
Stone & Webster, Boston, Mass.
Westhouse, Church, Kerr & Co., New York, N. Y.
White Companies, J. G., New York, N. Y.
Wiley & Wilson, Lynchburg, Va.
Wortham, Edwin, Richmond, Va.

INSPECTIONS AND TESTS.

Dow & Smith, New York, N. Y.
Fort Worth Laboratories, Fort Worth, Texas.
Froehling & Robertson, Richmond, Va.
Hunt & Co., Robert W., Chicago, Ill.
Institute of Indust. Resch., Inc., Wash., D. C.
Meade & Co., Richard K., Baltimore, Md.
Moore & Co., W. E., Pittsburgh, Pa.
Pittsburgh Testing Laboratory, Pittsburgh, Pa.

LANDSCAPE.

Burnap, Geo., Washington, D. C.

LEVATORS.

Brett Eng. & Contracting Co., Norfolk, Va.

LIGHTING.

Byllesby & Co., H. M., Chicago, Ill.
Ford, Bacon & Davis, New York, N. Y.
McCrory & Co., J. B., Atlanta, Ga.
Moore & Co., W. E., Pittsburgh, Pa.
Wiley & Wilson, Lynchburg, Va.

MECHANICAL.

Abbott, William G., Jr., Wilton, N. H.
Arnold Co., The, Chicago, Ill.
Dixie Engineering & Insulating Co., Atlanta, Ga.
Friend & Weber, New Orleans, La.
Fuller Engineering Co., Allentown, Pa.
Industrial Engineering Corp., Hazard, Ky.
Lide, Martin J., Birmingham, Ala.
Meade & Co., Richard K., Baltimore, Md.
Moore & Co., W. E., Pittsburgh, Pa.
Tucker & Laxton, Charlotte, N. C.
Wiley & Wilson, Lynchburg, Va.

METALLURGICAL.

Guernsey & Co., John B., Roanoke, Va.
Huckner & Co., John B., Roanoke, Va.
Mines Efficiency Co., Duluth, Minn.

MINING.

Brackett, F. Ernest, Cumberland, Md.
Clark & Krebs, Charleston, W. Va.
Guernsey & Co., John B., Roanoke, Va.
Hall & Sons, B. M., Atlanta, Ga.
International Conveyor Corp., The, Wash., D. C.
Johnston, Jr., A. Langstaff, Richmond, Va.
Mines Efficiency Co., Duluth, Minn.

MUNICIPAL.

Clark & Krebs, Charleston, W. Va.
Dow & Smith, New York, N. Y.
Elrod, Henry Exall, Dallas, Texas.
Jennings-Lawrence Co., The, Columbus, O.
Knowles, Morris, Pittsburgh, Pa.
McCrory & Co., J. B., Atlanta, Ga.
Moore & Co., W. E., Pittsburgh, Pa.
White, Gilbert C., Durham, N. C.

PACKING-HOUSE.

Brooks Engineering Co., O. L., Montrie, Ga.
Dixie Engineering & Insulating Co., Atlanta, Ga.

PAVING AND ROADS.

Brett Eng. & Contracting Co., Norfolk, Va.
Dow & Smith, New York, N. Y.
Elrod, Henry Exall, Dallas, Texas.
Freeland-Klyce Engr. Co., Nashville, Tenn.
Gardner & Howe, Memphis, Tenn.
Jennings-Lawrence Co., The, Columbus, O.
White, Gilbert C., Durham, N. C.

PUBLIC SERVICE PROPERTIES.

Byllesby & Co., H. M., Chicago, Ill.
Cooper & Co., Hugh L., New York, N. Y.
Ford, Bacon & Davis, New York, N. Y.
Kinneer & Co., W. S., New York, N. Y.
Moore & Co., W. E., Pittsburgh, Pa.
Stone & Webster, Boston, Mass.
Weller, Francis R., Washington, D. C.
Westhouse, Church, Kerr & Co., New York, N. Y.
White Companies, J. G., New York, N. Y.
Wortham, Edwin, Richmond, Va.

RAILROAD.

Brackett, F. Ernest, Cumberland, Md.
Clark & Krebs, Charleston, W. Va.
Hunt & Co., Robert W., Chicago, Ill.
International Conveyor Corp., The, Wash., D. C.
Kinneer & Co., W. S., New York, N. Y.
Wortham, Edwin, Richmond, Va.

REFRIGERATION.

Brooks Engineering Co., O. L., Montrie, Ga.
Dixie Engineering & Insulating Co., Atlanta, Ga.

REINFORCED CONCRETE.

(Bridges, Buildings, etc.)
Concrete-Steel Engr. Co., New York, N. Y.
Concrete Steel Bridge Co., The, Clarksburg, W. Va.
Foundation Co., The, New York, N. Y.
Freeland-Klyce Engr. Co., Nashville, Tenn.
Gardner & Howe, Memphis, Tenn.
Kinneer & Co., W. S., New York, N. Y.
Luten, Daniel B., Indianapolis, Ind.
Rust Engineering Co., The, Pittsburgh, Pa.
Savannah Engr. & Const. Co., Savannah, Ga.
Tucker & Laxton, Charlotte, N. C.
White Companies, J. G., New York, N. Y.

SEWERAGE AND WATER-WORKS.

Black & Veatch, Kansas City, Mo.
Brackett, F. Ernest, Cumberland, Md.
Ford, Bacon & Davis, New York, N. Y.
Howell & Son, David J., Washington, D. C.
Jennings-Lawrence Co., The, Columbus, O.
Knowles, Morris, Pittsburgh, Pa.
Moore & Co., W. E., Pittsburgh, Pa.
White Companies, J. G., New York, N. Y.
Wiley & Wilson, Lynchburg, Va.

STEEL WORK AND ROLLING MILLS.

Smythe Co., The, S. R., Pittsburgh, Pa.

STRUCTURAL STEEL.

Freeland-Klyce Engr. Co., Nashville, Tenn.
Hedrick & Hedrick, Kansas City, Mo.
Shearer, C. E., Memphis, Tenn.

ENGINEERS. (Compressed Air.)

Dake Engine Co., Grand Haven, Mich.

GAS AND GASOLINE.

American-Blakeslee Mfg. Co., Birmingham, Ala.
Cooper Co., C. & G., Mt. Vernon, Ohio.
De La Vergne Machine Co., New York, N. Y.
Foss Gas Engine Co., Springfield, Ohio.
Machinery Utilities Co., New York, N. Y.
Miers Corp., August, New York, N. Y.
National Transit Pump & Mch. Co., Oil City, Pa.
Novo Engine Co., Lansing, Mich.
United Machine Works, New York, N. Y.
White Engine Works, Kansas City, Mo.

KEROSENE.

American-Blakeslee Mfg. Co., Birmingham, Ala.
Novo Engine Co., Lansing, Mich.
United Machine Works, New York, N. Y.
White Engine Works, Kansas City, Mo.

OIL.

Baltimore Oil Engine Co., Baltimore, Md.
Buckeye Machine Co., The, Lima, Ohio.
Chicago Pneumatic Tool Co., Chicago, Ill.
De La Vergne Machine Co., New York, N. Y.
Foss Gas Engine Co., Springfield, Ohio.
Machinery Utilities Co., New York, N. Y.
Miers Corp., August, New York, N. Y.
Muncie Oil Engine Co., Muncie, Ind.
National Transit Pump & Mch. Co., Oil City, Pa.
Power Mfg. Co., The, Marion, Ohio.
United Machine Works, New York, N. Y.
Worthington Pump & Mch. Corp., New York, N. Y.

STEAM.

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Ames Iron Works, Oswego, N. Y.
Ball Engine Co., Erie, Pa.
Buffalo Forge Co., Buffalo, N. Y.
Cameron & Burkley Co., Charleston, S. C.
Clark Bros. Co., Olean, N. Y.
Cooper Co., C. & G., Mt. Vernon, Ohio.
Erie Pump & Engine Co., Medina, N. Y.
Harris Bros. Co., Chicago, Ill.
Hardie-Tyres Mfg. Co., Birmingham, Ala.
Houston, Stanwood & Gamble Co., Cincinnati, O.
Leffel & Co., James, Springfield, Ohio.
Lombard Iron Works, Augusta, Ga.
Mecklenburg Iron Works, Charlotte, N. C.
Morris Machine Works, Baldwinville, N. Y.
Murray Iron Works Co., Burlington, Iowa.
Nagle Corliss Engine Works, Erie, Pa.
National Transit Pump & Mch. Co., Oil City, Pa.
Schodfeld Iron Works, Macon, Ga.
Vulcan Mfg. Co., Milwaukee, Wis.

UNIFLOW.

Ames Iron Works, Oswego, N. Y.

ENVELOPES.

Young & Selden Co., Baltimore, Md.

EVAPORATORS. (Chemical.)

Birmingham Mch. & Fdry. Co., Birmingham, Ala.

EVAPORATING MACHINERY.

Louisville Drying Mch. Co., Louisville, Ky.

EXCAVATING MACHINERY.

American Clay Mch. Co., The, Bucyrus, Ohio.
Ball Engine Co., Erie, Pa.
Bay City Dredge Works, Bay City, Mich.
Buckeye Traction Ditcher Co., Findlay, Ohio.
Byers Machine Co., The, John F., Havana, O.
Fairbanks Steam Shovel Co., Marion, Ohio.
Hayward Co., The, New York, N. Y.
Keystone Driller Co., Beaver Falls, Pa.
Lidgerwood Mfg. Co., New York, N. Y.
Monaghan Machine Co., Chicago, Ill.
Morris Machine Works, Baldwinville, N. Y.
Osgood Co., The, Marion, Ohio.
Owen Bucket Co., The, Cleveland, Ohio.
Sauerman Bros., Chicago, Ill.

EXCAVATORS.

CABLEWAY DRAGLINE.
Ball Engine Co., Erie, Pa.
Sauerman Bros., Chicago, Ill.

TRAVELING.

Ball Engine Co., Erie, Pa.
Bay City Dredge Works, Bay City, Mich.
Buckeye Traction Ditcher Co., Findlay, Ohio.
Byers Machine Co., The, John F., Havana, O.
Fairbanks Steam Shovel Co., Marion, Ohio.
Hayward Co., The, New York, N. Y.
Keystone Driller Co., Beaver Falls, Pa.
Monaghan Machine Co., Chicago, Ill.

EXCELSIOR MACHINERY.

Kline, Lewis T., Alpena, Mich.

EXHAUST FANS. (Acid Proof.)

Durlon Casting Co., Dayton, Ohio.

EXHAUST HEADS.

Abendroth & Root Mfg. Co., Newburgh, N. Y.
American Spiral Pipe Works, Chicago, Ill.

EXPANDED METAL LATH REINFORCING.

Consolidated Expanded Metal Co., Bradock, Pa.

EXPANSION JOINTS. (Street and Road.)

Northwestern Expanded Metal Co., Chicago, Ill.
Pioneer Asphalt Co., Chicago, Ill.

EXPERT. (Agricultural.)

Morse, Stanley F., New Orleans, La.

EXPLOSIVES.

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Hodge Sales & Engineering Co., Mishawaka, Ind.
International Filter Co., Chicago, Ill.
Pittsburgh Filter Mfg. Co., Pittsburgh, Pa.
Richmond Water Softening Co., Richmond, Ind.
Tucker & Laxton, Charlotte, N. C.
- WATER STERILIZATION.**
Electric Ozone Sterilizer Co., Chicago, Ill.
- WATERWORKS, SUPPLIES, APPLIANCES.**
American Cast Iron Pipe Co., Birmingham, Ala.
Bourbon Copper & Brass Wks. Co., Cincinnati, O.
Cast Iron Pipe Public Bureau, New York, N. Y.
Coldwell-Wilcox Co., Newburgh, N. Y.
Columbian Iron Works, Chattanooga, Tenn.
Glamorgan Pipe & Fdry. Co., Lynchburg, Va.
Layne & Bowler Co., Memphis, Tenn.
Michigan Pipe Co., Bay City, Mich.
Standard Spiral Pipe Works, Chicago, Ill.
U. S. Cast Iron Pipe & Fdry. Co., Burlington, N. J.
Wood & Co., R. D., Philadelphia, Pa.
- WATCHMAN'S PORTABLE CLOCKS.**
Eco Clock Co., Boston, Mass.
Harding Bros., Inc., Chicago, Ill.
Newman Clock Co., New York, N. Y.
- WELDING PLANTS. (Oxy-Acetylene.)**
Superior Oxy-Acetylene Mch. Co., Hamilton, O.
- WELDING APPARATUS. (Electric.)**
Lincoln Electric Co., Cleveland, Ohio.
- WELDING APPARATUS. (Oxy-Acetylene Process.)**
Imperial Brass Mfg. Co., Chicago, Ill.
Superior Oxy-Acetylene Mch. Co., Hamilton, O.
- WELDING SUPPLIES. (Oxy-Acetylene.)**
Imperial Brass Mfg. Co., Chicago, Ill.
Linde Air Products Co., New York, N. Y.
Superior Oxy-Acetylene Mch. Co., Hamilton, O.
- WELL CONTRACTORS. (Oil, Artesian, etc.)**
Cook, A. D., Lawrenceburg, Ind.
Hughes Specialty Well Drill, Co., Charleston, S. C.
Layne & Bowler Co., Memphis, Tenn.
- WELL TOOLS AND SUPPLIES.**
Cook, A. D., Lawrenceburg, Ind.
Johnson, Inc., Edward E., St. Paul, Minn.
Williams Bros., Ithaca, N. Y.
- WHEELS AND AXLES.**
Electric Wheel Co., Quincy, Ill.
Oliver Mfg. Co., W. J., Knoxville, Tenn.
- WINDOW FRAMES AND SASH. (Fireproof.)**
Detroit Steel Products Co., Detroit, Mich.
Lupton Sons Co., David, Philadelphia, Pa.
Trueman Steel Co., Youngstown, Ohio.
- WINDOW GUARDS. (Iron and Wire.)**
Cincinnati Iron Fence Co., Cincinnati, Ohio.
Standard Iron & Wire Wks., Chattanooga, Tenn.
- WINDOW SASH. (Steel.)**
Detroit Steel Products Co., Detroit, Mich.
- WIRE.**
BARRER WIRE, ETC.
American Steel & Wire Co., Chicago, Ill.
Atlantic Steel Co., Atlanta, Ga.
Gulf States Steel Co., Birmingham, Ala.
Page Steel & Wire Co., Adrian, Mich.
Youngstown Sheet & Tube Co., Youngstown, Pa.
- FENCE.**
Cyclone Fence Co., Waukegan, Ill.
- FLAT AND ROUND.**
Roebing's Sons Co., John A., Trenton, N. J.
Abram Steel Co., New York, N. Y.
American Steel & Wire Co., Chicago, Ill.
Gulf States Steel Co., Birmingham, Ala.
Page Steel & Wire Co., Adrian, Mich.
- INSULATED.**
Electric Cable Co., New York, N. Y.
- TELEPHONE TELEGRAPH.**
American Steel & Wire Co., Chicago, Ill.
- WIRE CLOTH. (Iron, Steel, Brass, etc.)**
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Ludlow-Saylor Wire Co., St. Louis, Mo.
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Meyers Mfg. Co., The, Fred. J., Hamilton, N. J.
Midvale Steel & Ordnance Co., Philadelphia, Pa.
New Jersey Wire Cloth Co., Trenton, N. J.
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Columbian Rope Co., Auburn, N. Y.
- ZINC.**
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Amer. Elevator & Mch. Co., Inc. 17
Amer. Enam. Brick & Tile Co. 11, 30
American Frog &

XUM



More than two hundred million dollars! Such was the toll of fire last year and each year it is mounting steadily — and most of it preventable!!
 ¶ There might be some excuse if it cost a lot of money to guard against fire. But Globe Sprinklers will watch over your property and pay for themselves at the same time from the insurance premium reductions they secure.

GLOBE AUTOMATIC SPRINKLER CO.

2026 Washington Ave., Philadelphia, Pa.

Sales and Engineering Offices in all principal cities

GLOBE

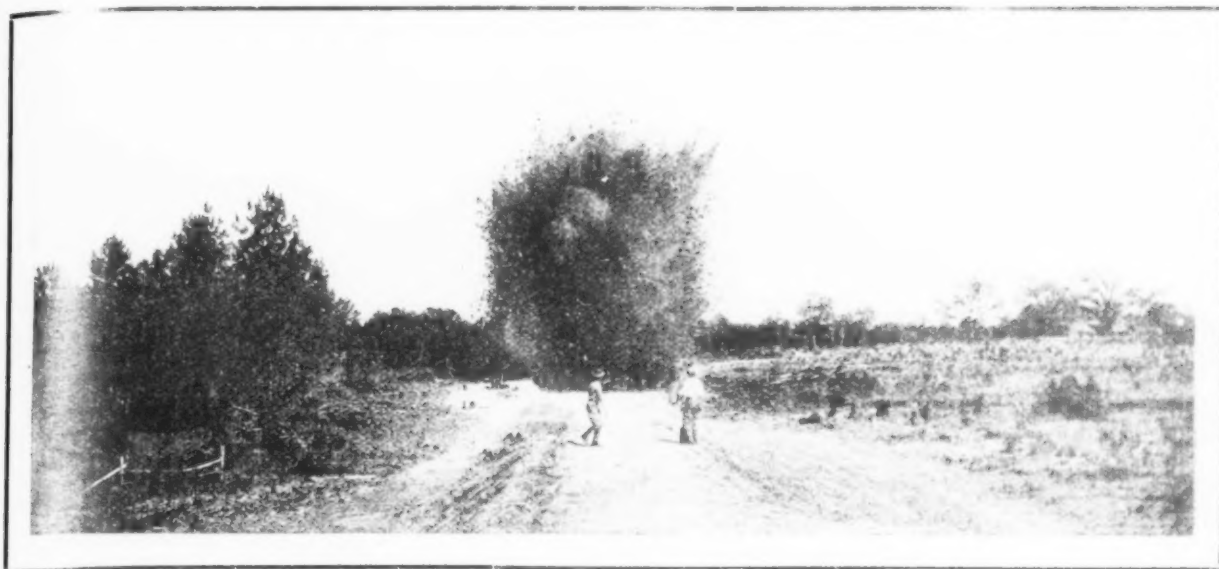
SPRINKLERS

OFFICES IN THE SOUTH: ATLANTA, NEW ORLEANS, AUSTIN, MEMPHIS, CHARLOTTE, BALTIMORE





DU PONT AMERICAN INDUSTRIES



In 1918 We Will Spend \$263,096,610 for Highways— How Far Will It Go?

UPON the methods employed will depend the number of miles of road that will be constructed with this appropriation.

Mark **X** Before Subject That Interests You
and Mail This Coupon to

E. I. DU PONT DE NEMOURS & CO.
Advertising Division

WILMINGTON DELAWARE

<input type="checkbox"/> Band Making	<input type="checkbox"/> Fabricoid Shooting
<input type="checkbox"/> Ballistical Dynamites	<input type="checkbox"/> Fairbairn Rubber Cloth
<input type="checkbox"/> Blasting Powders	<input type="checkbox"/> Truck Spec. Fabricoid
<input type="checkbox"/> Blasting Supplies	<input type="checkbox"/> Marine Spec. Fabricoid
<input type="checkbox"/> Bomb Explosives	<input type="checkbox"/> Bank Finish Fabricoid
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<input type="checkbox"/> Surtung Wall Finish	<input type="checkbox"/> PYRAXIN Specialties
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<input type="checkbox"/> Flonkote Enamel	<input type="checkbox"/> Leather Solutions
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<input type="checkbox"/> Antiride Iron Paint	<input type="checkbox"/> Metal Lacquers
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<input type="checkbox"/> Craftsmen Fabricoid	<input type="checkbox"/> Fur Distillates
	<input type="checkbox"/> Benzolene

Name _____
Address _____
Business _____

NOTE: When in Atlantic City visit the Du Pont Products Store, Boardwalk and Pennsylvania Avenue, and the Trapshooting School, on Ocean End of Young's Million Dollar Pier.

Enter the Du Pont Photograph Contest \$500 IN PRIZES

The Du Pont American Industries offer \$500.00 in prizes for the fifty best photographs, suitable for illustrating our advertising, submitted before September 1, 1918. Write to Advertising Division, Du Pont Co., Wilmington, Delaware, for list of subjects and conditions of award.

Labor being at a premium, and the time factor important, it is necessary to use equipment that will conserve both.

There is scarcely a mile of road construction that cannot be speeded up economically with the aid of explosives. For loosening hard soil, for excavating ditches, "mudcapping" boulders, widening rock-bordered thoroughfares, a Red Cross Explosive will prove its value.

"Road Construction and Maintenance" is the title of our valuable booklet that points the way to better methods. Do you want a copy? Let the coupon be your answer.

E. I. du Pont de Nemours & Company

POWDER MAKERS SINCE 1802

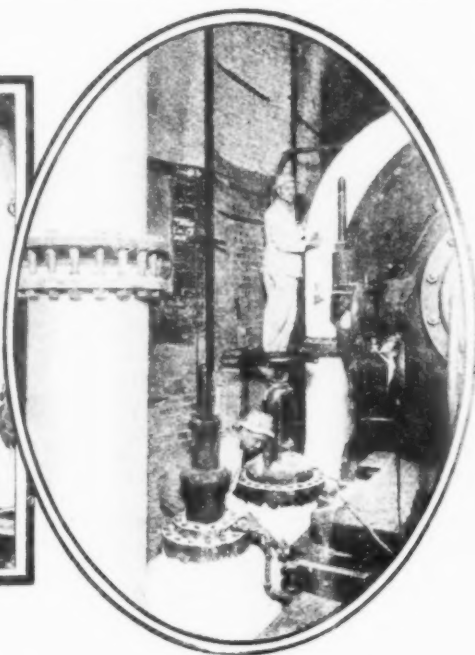
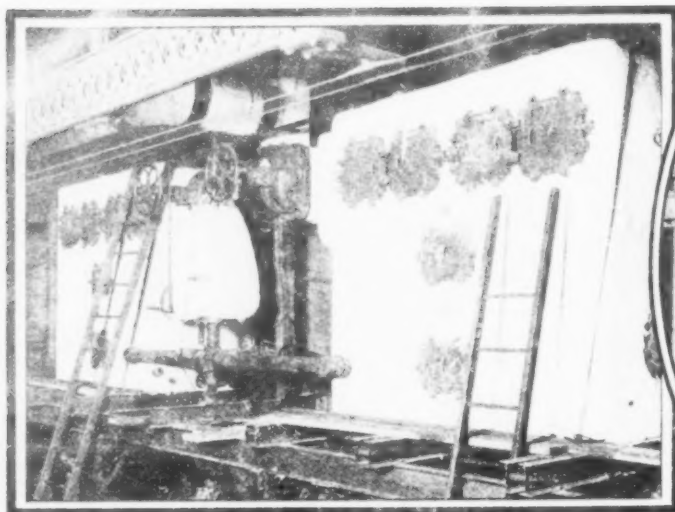
Wilmington

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THE DU PONT AMERICAN INDUSTRIES ARE:

E. I. du Pont de Nemours & Co., Wilmington, Delaware.
Du Pont Chemical Works, New York.
Du Pont Powder Co., Wilmington, Delaware.
The Artisan Works, 745 Broadway, New York.
Harrison Works, Philadelphia, Pa.
Du Pont Fire Works, Wilmington, Delaware.

DU PONT



Twenty-five-year-old "85% Magnesia" reapplied on new steam-pipes

Saves as much coal this year as when it was first applied twenty-five years ago.

The International Railway at Niagara Falls has carried millions of sightseers during the last quarter century. But like all hard-worked machines, its steam-plant wore out at last and had to be renewed.

The steam pipes and boilers were originally covered with "85% Magnesia." In the renewal the metal was scrapped, but the "85% Magnesia" coverings were found to be in such good condition that the greater part of them were used again on the new metal.

Twenty-five years is a long time in the history of any power-plant, but it by no means represents the limit of endurance of "85% Magnesia" coverings.

Further than that, there is *no loss of efficiency through lapse of time.*

The millions of microscopic dead-air cells contained in a single section of "85% Magnesia" provide an impenetrable barrier to the escape of heat. It does not and cannot deteriorate in use.

High-pressure and superheated steam do

not affect it. It will neither char, crumble, nor decompose in the severest steam service.

It resists alike the effects of heat, of steam, or water leakage, the expansion and contraction of pipes, and all other influences common to steam power-plant operation.

As a Coal Saver and a giver of increased efficiency to your plant, it pays its own way from the very start and therefore is not to be regarded as an *expense*. As an *investment* it returns continuous dividends as long as your plant is in operation.

Write us for the illuminating booklet, "Let '85% Magnesia' Defend Your Steam." The specification for the correct application of this master heat insulation, compiled and endorsed by the Mellon Institute of Industrial Research (University of Pittsburgh), is sent to Engineers on request by the

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ASSOCIATION
of AMERICA



721 Bulletin Bldg.
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Penna.

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